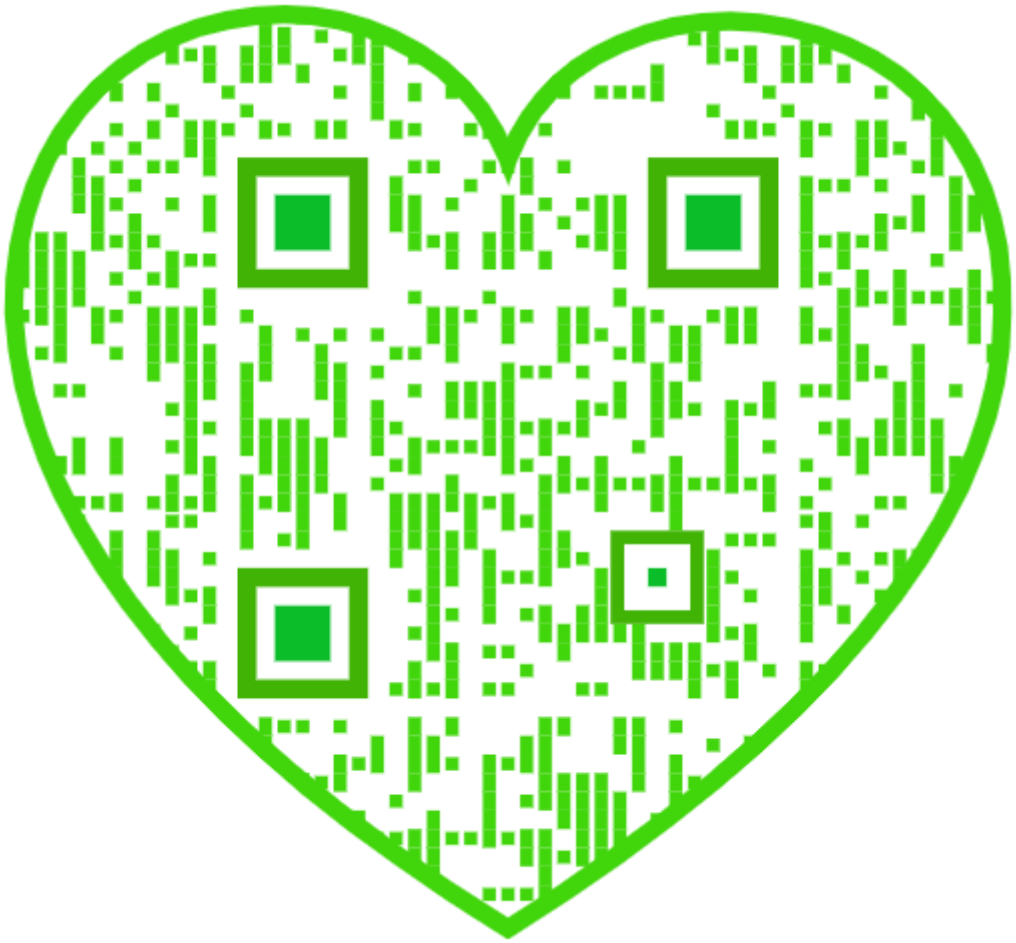

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EDITOR'S PREFACE.

It was at one time the intention of the Editor of the following pages, to publish an original work on the subject of Electrical-Psychology. He was desirous to add his contribution to the increasing demand for information on the scientific development of Mental Phenomena, but having been incessantly occupied in the public delivery of lectures, and other professional matters, he has not yet been able to command the requisite leisure.

The principal portion of this volume was originally published in a series of lectures, which were delivered by the Rev. J. B. Dods, during the winter of 1849–50, before the Senate of the United States of America, at the request of a large number of its distinguished members. The alterations made are chiefly verbal, except in the introductory chapter, which has been re-written, in order to admit of notices of the editor's lectures, and some of the medical results of his prac-

tice. The three chapters at the end, are taken from a treatise published by J. S. Grimes, late Professor of Medical Jurisprudence in Castleton Medical College, U.S., a work issued in 1845, long prior to the performance of any experiments in what is termed Electro-Biology, or Electrical-Psychology.

These extracts from the work of Professor Grimes are introduced as having a more *practical* bearing upon the production of the phenomena exhibited by the Editor and others in Electrical-Psychology, than any thing contained in the work of Dods. It will also be perceived, that while the latter contends that electricity is the agent by which these wonderful phenomena are controlled, the former designates it "etherium." The name, however, is nothing. It is for the presence of a universal agent by which these results are produced, that the disciples of Van Helmont and Mesmer contend. This is, in fact, a favourite notion with many philosophers of the present day, and both our authors have made free use of it in explaining mental and physiological phenomena.

There is perhaps no part of this work which will be read with more interest than that which relates to the philosophy of disease, as produced by mental and physical impressions, and the rationale of its cure by the same agents.

The attention of the reader is also particularly called to what is inserted from the work of Grimes, as the views presented by him in relation to a central organ of consciousness, his remarks upon what he terms "Inter-Phreno Senses," and his explanation of "Credencive Induction," are not only original, but seem to be absolutely essential to a correct understanding of many of the phenomena now being exhibited upon various persons not in an unconscious mesmeric state.

That the candid perusal of this brief volume may have the effect of awakening an interest in the minds of many, that shall lead them to a careful investigation of this important subject, is the earnest wish of the Editor.

H. G. DARLING.

EDINBURGH, *Jan.* 11, 1851.

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ELECTRICAL-PSYCHOLOGY.

INTRODUCTION.

The value of any science or subject, to the majority of mankind, is derived from the practical application of which the truths of that science or subject are susceptible. There are minds that acquire knowledge for the sake of the mere pleasure that awaits the action and the acquisition of the intellectual powers. But the great Author of nature has not rested the progress of the human race upon the simple desire of the mind for knowledge. He has granted, with such desire, strong incentives, the tendency of which is, to render truths, the most abstract and difficult, available for the common purposes of life. In the sublime and beautiful science of astronomy, men have not been satisfied with observing the movements of the planets, nor even with ascertaining the precise time of their revolutions in their various orbits; but they have brought that knowledge to earth, and thereby given to human history an unfailing chronology, and opened to industry and enterprise, a pathway over the otherwise trackless ocean.

So has it also been in regard to that subtile, but mysterious agent, electricity, in the investigation of which, men have not been satisfied, until they have ascertained that by a simple rod, from its destructive action may be protected all the delights and interests that centre around the domestic fireside. The time has arrived, too, when mind, in all its multifarious manifestations, is studied, not with reference to itself alone, but with a view to ascertain its connection with, and influence *over* the physical organism through which all its varied phenomena are exhibited. Yet he who dares to advance a new idea, or even to exhibit a new phase of an old one, must expect to see his bantling share the fate and fortune of every thing new. It will be subjected to the test of the severest scrutiny, and to the warfare of the most energetic opposition. The great majority of mankind are so constituted as to reject a new plan, because of the suggestion of self-esteem; that it is not *my* plan; and a new truth, because it is not of *my* discovery. The critic, Dennis, could hear no thunder unless it was *his* thunder. Old theories that are in part or wholly destitute of truth, are strong only in the strength of their advocates; new truths are strong of themselves. It is to be expected that those who have embraced a particular theory or opinion, who have long continued its firm and unwavering advocates; whose reputations are in some degree based upon its permanence, should continue to exert their utmost possible power in securing it a perpetuity. They will cling to it with the strong tenacity of a giant's grasp on life. That theory or opinion consti-

tutes the cloak that mantles them, and, like the traveller in the whirlwind, they will hold on to it the stronger, the harder the wind blows. This adherence to the old, and rejection of the new, like all other general facts, results in good. It is the safeguard against useless and inexpedient innovation. It protects the existing state of things, until a state obviously preferable is offered. It checks the constant tendency to change, which is sufficiently impressed upon all human phenomena. We are not therefore disposed to complain at the opposition with which infant science has always had to contend. We would rather rejoice that it has ever been so. We do not even complain of the spirit with which that opposition has been conducted, although we could have wished its manifestations had been more humanized than in many cases they have been. We can even pass over in silence the instruments of opposition, assertion, and ridicule, after entering our protest against their use in general, in the investigation and discovery of truth. All we contend for is, fairness in the representation of our views. Truth always contains in itself the elements of success. Its ultimate triumph is as sure as its nature is unalterable. The history of science has shown this, from its first dawn on earth till the present hour, and so will it continue, down to the last second of time. How literally true is this in relation to the progress of astronomical science. And what a host of worthies, like Copernicus and Galileo, might be named as the victims of unrelenting persecution. But the efforts of these men to suppress the truth, and

bury in obscurity the genius that dared announce and maintain it, arrested not the globe in its mighty course; it still rolls on in undisturbed grandeur, as they proclaimed it. Whether silence reigns, earthquakes rumble, or thunders roll, she keeps her mighty course, unaffected by the opinions of men, or the revolutions of ages. At the same time that there is confessedly something most grand in the operations of nature, and even while the most gifted minds are revelling with delight amidst her magnificence, and feasting upon her splendours, there is still something humiliating in the thought, that incomprehensibility continues to hold its dark and sullen empire over the causes of many of her most sublime manifestations.

Man, however, is intellectually a progressive being. Though confined to a narrow circumference of space, and chained to this earth, which is but a small particle of the unbounded universe; yet as his mind receives the stamp of original greatness, he is nevertheless capable of extending his researches far beyond the boundaries of this globe. His mind is capable of a ceaseless development of its powers. From the faint glimmering of infantile reason, he passes on to that intellectual strength and grandeur, when he can take a survey of the planets, the dimensions of the sun, trace the comet in its erratic course, analyze the works of God, and comprehend the vast and complicated operations of his own mind. But before proceeding further, it becomes necessary, clearly and distinctly to state the subject to be presented, that we may enter upon it understandingly, and, if possible, with a correct appre-

hension of its nature and importance to the human race. Perhaps this cannot be more satisfactorily accomplished, than by briefly stating what results can be produced, through a certain nervous influence by one human being upon another. To one, who for the first time witnesses these phenomena, they appear exceedingly marvellous and incredible.

I shall, therefore, instead of asserting what can be done, here insert a few from the multitude of published newspaper articles conveying the opinions of the press, as well as letters and resolutions from highly reputable and distinguished parties. From these an opinion can be formed of the effects produced, of the cures performed, and of the high estimation in which the subject is held by those who have made themselves acquainted with its hidden, but mighty power.

From "PORTLAND ARGUS," 28*th February*.

THE City Hall has been for the past two weeks the centre of attraction to a large number of our most intelligent and respectable citizens, where H. G. Darling, M.D., who is extensively and favourably known throughout the New England States, as a talented and eloquent lecturer upon Physiology, has been discoursing upon his favourite science. The doctor, however, who seems to be a gentleman determined to keep up with the times, in relation to every thing pertaining to his subject, has recently added a new feature to his heretofore attractive programme. This consists in the exhibition (after the close of the lecture) of a variety of the most wonderful and astonishing experiments in

what he terms Electrical-Psychology. We confess that when we first read the doctor's announcement, we feared for his reputation, thinking he had promised what it would be impossible for him to accomplish, yet after closely observing, for several successive evenings, the results produced, we are constrained to acknowledge, that however marvellous the statement, the reality far transcends it. To detail all that we have witnessed would occupy more space than we can appropriate to the subject. We shall, therefore, only state, that, upon one evening, we saw no less than thirteen persons, varying in age from fifteen to forty years, so completely subjected to the operator's influence, that not a muscular movement could be made by one of them, without his permission. All their sensations were equally controllable. A word from him would make them shiver, another wet with perspiration. At his suggestion, they saw the gathering storm, and fled in wild dismay from its terrific approach. These are but a few of the many things, whereof we testify having seen. To question their truthfulness, would be to impeach the veracity of some of our most respectable inhabitants, upon whom these astonishing results have been exhibited. It is impossible, by language, to convey an adequate conception of the strangeness of these phenomena. To be appreciated, they must be witnessed. The query arises at once, at least, in every benevolent mind, cannot such a mighty and hitherto undeveloped power, be made available for the amelioration of human suffering? And this, we are happy to learn, is the very thing to which the doctor is most

anxious to direct the attention of medical and scientific men. He has already shown its efficacy in our own city in three or four cases of paralysis and neuralgic affections that had baffled the skill of our most intelligent and able physicians. One of these we will briefly relate. It is that of Mrs. P. of Brunswick, aged twenty-eight years, whose sister, Mrs. S., resides at 108 Cumberland-Street, and of whom any inquiries can be made by those interested to learn more definitely the results in this case. Having heard of the doctor's success in the treatment of persons similarly afflicted, she was induced to pay her sister a visit, and thus obtain an interview with him. For more than three years she had been afflicted with pariphlegia, and so complete was the paralysis, that the entire left side was almost destitute of sensation, while the power of motion was so effectually lost as to render it impossible for her to rise from her seat, or to walk a step without assistance. Such was her condition when the doctor saw her for the first time, and, although neither she nor her friends anticipated a restoration at once, if ever any relief should be obtained, yet their joy was not greater than their astonishment, to see her, in less than thirty minutes, walk across the room without assistance from any one, unless the mere presence of the doctor could be said to afford that assistance. Nor does this appear, as some allege, to be an evanescent influence, since it is now more than a week since the doctor first saw her, and she still continues to improve, as we have just learned from a personal interview with her and her friends.

Cases like these are full of deep and thrilling interest,

and cannot fail to awaken in every reflective mind, the most profound thought, what this power is, or to what extent it may be applied, either for good or evil, we pretend not to know. But from what we have seen, we may be permitted to say, that the subject is alike novel, profound, and useful, thus affording that combination of variety, which cannot fail to render it attractive to the imaginative, philosophic, or philanthropic mind.

(From the "BANGOR COURIER," *May 17th*, 1850.)

Close of Dr. Darling's Lectures upon Electrical-Psychology.—Market Hall was well filled last evening to listen to the final lecture upon this subject, which has excited so much interest of late in our city. Having heretofore given extended notices both of the lectures and experiments, it affords us pleasure to insert the following resolutions, inasmuch as they fully sustain the positions taken by us in relation to the subject.

"At the conclusion of Dr. Darling's experiments in Market Hall this evening, J. C. Barker, M.D., arose, and, having offered a few preliminary remarks, presented the following resolutions, which, being seconded by G. F. Sargent, Esq., were unanimously adopted by the numerous assembly. 1st. Resolved, that we have listened with deep and increasing interest to the novel and speculative views, so ably advocated by Dr. H. G. Darling in his brief course of lectures upon Electrical-Psychology.

"2d. Resolved, that the experiments exhibited at the close of each lecture, illustrative of the subject, are alike wonderful, novel, and inexplicable, according to

any system of mental philosophy hitherto developed, and, therefore, suggestive of the most profound thought to every reflective mind.

"3d. Resolved, that disclaiming all intention of deciding upon the correctness of the theory advanced by Dr. Darling to account for these mysterious results; yet having seen them produced upon a large number of persons of well-known standing and position in this city, longer to doubt their reality would be the height of credulity, and a virtual impeachment of the integrity of a number of our most respectable citizens.

"4th. Resolved, that a copy of these resolutions be presented to Dr. Darling, and also to each of the newspapers in this city for publication."

Other instances of a still more striking character might be given. The testimony of hundreds of the inhabitants of Yarmouth Maine, might be produced, that, in less than one hour, Miss Jane Carpenter of that town, had, by the aid of this science, had the power of speech restored, which, for seventeen months previously, she had entirely lost. But these are sufficient to exhibit the nature and grandeur of the subject; such are its results, and such its end and aim, and if they commend it not to benevolent reflecting minds, we can conceive of no considerations that will.

Some have the impression, however, that this after all is but another phase of Mesmerism. That there is a very marked difference between the two will be evident to every one upon a moment's reflection. All mesmeric phenomena are regarded as sympathetic. This sympathy is so strong and complete between the

mesmeriser and the subject that, what he sees the subject sees,—what he hears the subject hears, and so on with all the senses; and finally, his will is the will of the subject. Electrical-Psychology is not, however, a doctrine of sympathy, but of *impressions*. The term *Psychology* is derived from the combination of the two Greek words ψυχὴ *the soul*, and λογος *a word*, or *discourse;* and as it is contended that all the manifestations of mind are made through the agency of electricity, the appropriateness of the term *Electrical-Psychology* will readily be perceived. A person in this state has no sympathy with the operator. All his special senses are entirely independent of the operator, and he continually exerts his will against him, and always resists to the extent of his muscular powers. A person aroused from the mesmeric slumber has no recollection of any thing transpiring while in it; on the contrary, one in the Electro-Psychological state is perfectly conscious of all that has taken place, and is a witness of his own actions, however ludicrous they may have been.

Other distinctions might be named equally marked, exhibiting the distinction between the two. Such as that many persons have been found naturally in the Electro-Psychological state, who, after repeated trials, have been found entirely unsusceptible to the mesmeric influence. Another still, is, that no person is naturally in the mesmeric state, while thousands are naturally in the Electro-Psychological state.

The experiments in both are performed, unquestionably, by the same subtile, imponderable agent, but this fact by no means renders them identical.

CHAPTER I.

As the subject of Electrical-Psychology is now fairly introduced, its phenomena stated, and its importance to the human race clearly pointed out, we are now prepared to enter the diversified fields of nature; to glance at the operations of mental and material existences; and to proceed understandingly to the consideration of its claims to PHILOSOPHY, as the foundation on which it rests, and the power by which its existence must be sustained. But as such strange facts as have been stated are most trying to human credulity, as they are calculated to awaken the deepest feelings of contempt in the bosoms of the sceptical, and to draw forth the sneers of mankind, so it may be proper to speak, in the first place, of the march of science, the beauty of the independent expression of our thoughts, and to notice the fate of the opponents of science in all ages of the world.

It is by no means an enviable task to step aside from the long beaten path of science into the unexplored and trackless regions of solitude and silence. By so doing, one assumes no very enviable position as it regards popularity. Independent thought and fearless expres-

sion have ever drawn forth the scoffs and sneers of that portion of our race who have adopted, without investigation, the scientific opinions of others. Reference, of course, is here made to those only who have received their ideas from others by inheritance, as they did their real estate. For the one they never laboured, and for the other they never thought.

Such persons, though professing to be learned, and perchance even claiming to be the guardians of science, are nevertheless its greatest enemies; and by exerting their influence in favour of old opinions, however absurd, and against any innovations, however true, useful, or grand, are checking the mighty march of mind. They are clogs of more than leaden weight hanging upon the chariot wheels of science that are rolling through our world. It commenced its career at the breaking morn of creation, with but few passengers on board, and has continued its course with increasing speed and growing glory down to the present moment. It now travels with the brilliancy and rapidity of the lightning's blaze, and even compels the very lightnings to speak in a familiar voice to man! Yes; they even write, not only their forky gambols on the bosom of the dark cloud, but they write on paper, and transmit human thought as swift as thought can move.

The chariot of science is destined to continue its majestic course, in duration coeval with our globe! Still more! it is destined to outlive the dark and sullen catastrophe of worlds! The chariot of science, with ever-increasing power, magnificence, and glory, is destined to pass the boundaries of the mouldering tomb—

to snatch immortality from the iron grasp of death, and roll on in living grandeur through the eternal world, gathering new accessions of intellectual beauty and unending delight. Its passengers here are mortal men. There they will be angel, archangel, cherubim, seraphim, and the glorified millions of our race! The mind of man wears the impression of divinity, the stamp of original greatness; and is destined to ripen in mental vigour as the wasteless ages of ETERNITY roll. Hence the very principles of our nature as an impression from the hand of God, forbid us to stand still. Their command is ONWARD.

If no human being had dared to hazard the expression of an original thought, then nothing in the realms of science would have been disclosed by speech, nor penned in books. A dreary, barren waste, wrapped in solitude and night, would have reigned for human contemplation. But instead of this frightful picture of desolation, we see those fruitful fields of mental and moral beauty, so rich in the scenery of thought, and in endless variety, present themselves to our view. A secret rapture of thrilling delight fills the heart as we glance over this lovely scene, on which human research has thrown a splendour surpassing that of the noontide blaze.

Had not some master spirits dared to freely speak and write their thoughts, then those pretended friends of science, who now oppose every thing that may appear to them both new and strange, would have been destitute of that knowledge they obtained from books; and not daring to think for themselves, they would have

remained in mental night. It is by daring to step aside from the beaten track of books, and bringing forth from the dark arcana of nature into the light of day some new truth, that we add our mite to the common stock of knowledge already accumulated. He who denies us this grand right of our nature is a scientific bigot, and has yet to learn, that even the school and college were only established to discipline the mind for action. There the student, through books and instructors, is only made to see how other men have dared to think, and speak, and write, and thus his mind, being made to feel its innate freedom, power, and greatness, becomes inspired with a self-determination to do the same. This makes the MAN, and answers the lofty end of human existence. On the other hand, he who goes through life, leaning entirely upon books and the opinions of others, without thinking for himself, renders his present existence a blank, inasmuch as he lays his head in the dust, without having bequeathed one original thought to the world for the benefit of after generations.

The truths that God has established inherent in nature, are not only infinitely diversified, but are at the same time immutable and eternal. No possible addition can be made to their number, nor is it in the power of man to create or annihilate a single truth in the EMPIRE of NATURE. They exist independent of his *belief* or *unbelief;* and all he can do is to search them out, and bring them forth from darkness into the light of day. And he who has the magnanimity to do this, so far from being opposed and persecuted, should be

sustained and encouraged as the benefactor of his race.

The Creator of the universe is the Author and Proprietor of the great volumes of nature and revelation. Hence divines, at least those who are men of letters, should not start at any new scientific revelations, and exclaim, "If this be true we must give up our Bibles!" As men of science, they have nothing to fear from new discoveries in the shoreless ocean of truth. The volumes of NATURE and REVELATION both claim the same perfect Author, who had every thing open and naked to his omniscient inspection, and exercised infinite wisdom in producing and establishing the order and harmony of the universe.

Though this globe, and perhaps the whole of our planetary system, was finished six thousand years ago, yet we have no reason to suppose that this was the first effort of his creating energy. We are floating in an immensity of space that knows no bounds, like the mote in the sunbeam. This is peopled with rolling worlds, in number beyond an angel's computation. And the residue, which has not yet become the abodes of light, life, order, and beauty, is filled up with matter still in its uncreated state. Hence the work of creation has been going on from eternity, and will continue to progress, so long as the throne of the self-existent Jehovah endures, without ever arriving at an end in the sublime career of creation! New brother creations are every moment rolling from his omnific hand, and that creating fiat will never, never cease.

These ideas of the wonder-working Jehovah, from

whose all-forming hand worlds and systems of worlds are continually rolling, and have been, for millions on millions of ages, force upon us those amazing conceptions of the oppressive grandeur of his works under which the mind labours and struggles in its contemplations, but is borne down, and lost and bewildered in the immensity of the theme. ORDER, VARIETY, AND BEAUTY, in endless succession, meet us on every hand. All this has been accomplished by the Infinite Mind, through electrical action, and bespeaks the vastness and sublimity of the subject. It is the science of the living mind, its silent, mysterious workings, and energetic powers. It is a science that involves the majestic movement of rolling worlds, the falling leaf, and claims the GREAT LAW of the universe as its own. The vastness, as well as the transcendent importance of the subject, clearly evince that it is worthy to be embraced by every independent, noble, and generous mind.

That Electrical-Psychology should meet with opposition from men of a peculiar constitution of mind, and a certain degree of scientific attainments, is nothing strange. Nor is it at all miraculous, that a few who are deemed men of talents, should oppose, and even deride it as a humbug. But as GENIUS is supremely higher than TALENTS, so the declaration that no man of GENIUS has ever opposed Electrical-Psychology may safely be made; nor in any age of the world has GENIUS ever been enlisted in opposing the dawning light of any of the sciences that have arisen on earth from the morning of creation to the present day. But as before remarked,

that this science should meet with opposition from that class of scientific men, who always stand watching the direction in which the breeze of popularity may chance to blow with the strongest force, and who are anxious, through these means, to bring themselves into notice, and thus gain a momentary fame from the passing crowd, is nothing strange. It only proves the fact that ELECTRICAL-PSYCHOLOGY is, in the infancy of its being, destined to share the fate of all great and useful sciences, that now stand unshaken in the republic of letters. All, in their infancy, received from such men a like opposition, and upon their founders they freely breathed out their derision, scorn, and sneers.

Harvey discovered the CIRCULATION of the blood, and disclosed it to the world. He was opposed and derided, and much of that *talent, learning*, and *cunning* referred to, was enlisted against him. They sought to paralyze the towering wing of his GENIUS; to blast his reputation; to wither the fairest flowers of his domestic love, hope, and joy; and to hurl his brilliant discovery from the light of day to the darkness of night. But Harvey's name stands immortal on the records of true fame, and the blood still continues to frolic in crimson streams through its living channels, while his learned opposers are forgotten. Galileo discovered the rotation of this globe on its axis. So great was the opposition of the learned powers combined against him, that they arraigned him and his theory at the august and awful bar of humbug. There they fairly tried him and his discovery under the splendid and majestic witnesses of *derision, sneer*, and *scorn;* and the court very gravely

decided, that his discovery was a heresy, and that he must openly acknowledge it to be so to the world. To this sentence he submitted—acknowledged his theory to be a heresy, but remarked, that he nevertheless believed it true. Galileo lives in the bright page of history. That sentence did not arrest the globe in its mighty course. It still continues to roll on its axis as he discovered and proclaimed, while the learned opposers of his theory, who courted popular favour at the expense of honour, are sunk into merited oblivion.

NEWTON'S GENIUS, when he was but a boy, intuitively drove him to study *gravitation* by piling up small heaps of sand, and to notice more strictly this power in the falling apple. It drove him to study *adhesion* by watching the union of the particled water at the side of some favourite stream; and to perfect this science he is next at the centre of the globe. From gathering pebbles in boyish sport on the ocean's shore, he is next among the stars, and at length proclaims to the world his system of PHILOSOPHY and ASTRONOMY. He was derided and mocked as a silly-headed fool, and his whole magnificent system was spurned with sneering contempt, and pronounced a humbug by the old school of philosophers and astronomers. But substances continue to respect the law of *gravitation*, and rolling worlds to obey the law of *attraction* and *repulsion*. NEWTON lives in the brightest blaze of fame; for his name is written in starry coronals on the deep bosom of night, and from thence is reflected to the centre of the globe; while the opposers of his magnificent discovery are sunk to the

shades of unremembered nothingness. The clouds and mists of their own evanescent fame have become their winding sheet.

Fulton was derided, and even men of science pointed at him the finger of indignant scorn, because he declared that steam—a light and bland vapour, which could be blown away by human breath—could move an engine of tremendous power, and propel vessels of thousands of tons burthen against wind and waves and tides. They declared it to be the greatest of humbugs, and the most silly idea that ever entered a silly brain; or else the trick of a knave to make men invest capital in order to effect their ruin. His friends, even though not over-sanguine of success, yet defended him as a man of honour. But FULTON "stood firm amidst the varying tides of party, like the rock far from land, that lifts its majestic head above the waves, and remains unshaken by the storms that agitate the ocean." The impression of FULTON'S GENIUS is seen on all the machinery moved in our happy country by this subtile power. It is seen in railroad and steamboat communications, that bring the distant portions of this country in conjunction. It is seen in the majestic STEAMSHIPS of England, that bring her and the transatlantic world into neighbourhood, by a power that triumphs over all the stormy elements of nature. FULTON, as a man of GENIUS, is remembered as one of the great men of the universe, while his opposers are silent and forgotten.

Thus far have physical and mechanical sciences only been noticed, involving the chemical properties of material substances, and the general operations of

nature. Those that relate to the improvement of the mind deserve a passing notice. The SCIENCE of PHRENOLOGY, so beautiful, elevating, and useful in its nature, and having so strong a bearing upon the character and destiny of man, as an intellectual, social, and moral being, and even involving the dearest interest of our race—has been, and by some still is, most shamefully abused. GALL, its discoverer, was persecuted; and SPURZHEIM, COMBE, and others have received unmerited abuse. Thus far they have most sucessfully met and repulsed the assaults of men—won the victory—gathered new accessions of strength, and still hold the field. They are business men, who never slumber at the post of duty. They have made new discoveries and improvements; gathered an immense variety of cabinet specimens of skulls and busts, from the idiot up to the most brilliant intellect, from the cold-blooded murderer up to the melting soul of a benevolent and philanthropic Howard. They have made a righteous development of true character in the phrenological examinations of thousands of human heads; have directed the anxious parent how to train up the child of his affections; have pointed out to the sighing lover how to choose a congenial spirit of companionship for life; and have poured the light of mental and moral improvement in silvery streams on the GRAND EMPIRE OF MIND. Yet such a science as this has been called a *humbug!* and such men as these have been assailed. Their bones are worthy to repose with the great men of the universe, and their names shall live on the bright scroll of fame down to the last vibrating pendu-

lum of time—shall live when the opposers of phrenological science shall have sunk from human remembrance.

Such has been the fate of all sciences in the infancy of their existence. The moment they were born into life, the battle-axe was raised against them, and each in succession has fought its way up to manhood. The victory in favour of truth has always been sure, and millions of sycophants in the contest have perished.

How lamentable is the consideration, that there are those in this day of light, who, regardless of the warning voice of past generations, coming up from ten thousand graves, still shut their ears and close their eyes—and even sacrifice principle, to keep popular with those on whom they depend for a momentary fame. But they are not the men whose names will stand imperishable in the annals of history, to be handed down to future generations. They are destined to perish from human remembrance, and not a trace of them be left on earth.

CHAPTER II.

What has been stated in the preceding chapter seemed necessary to remind the reader of the opposition, sneers, and scorns, that the noblest sciences have encountered in the infancy of their being, and in all ages of the world. It is notwithstanding a consolation to know that, however sceptical men may be in relation to any thing new, yet so far as stern reality is concerned, their *unbelief* cannot frown truth into falsehood, nor can their *belief* smile falsehood into truth. Hence the *belief* or *unbelief* of mortals cannot in the least affect those truths that God has established inherent in nature, and with which his unbounded universe swarms.

It is proposed here to defend the electrical theory of the universe against the assaults of men, to notice the immense variety of material existences, to glance at the animated forms of living beauty, to scrutinize the chemical properties of created substances, and to pour, if possible, the light of truth on rolling worlds. Let us even venture to step back beyond the threshold of creation—venture to lift the dark curtains of primeval night, and muse upon that original, eternal material, that slumbered in the deep bosom of chaos, and out of

which all the tangible substances we see and admire were made. That eternal substance is *electricity*, and contains all the original properties of all things in being. Hence all worlds and their splendid appendages were made out of electricity, and by that powerful, all-pervading agent, under Deity, they are kept in motion from age to age. Electricity actuates the whole frame of nature, and produces all the phenomena that transpire throughout the realms of unbounded space. It is the most powerful and subtile agent employed by the Creator in the government of the universe, and in carrying on the multifarious operations of nature. Making a slight variation in the language of the poet, it may with propriety be said—

"It warms in the sun, refreshes in the breeze,
Glows in the stars, and blossoms in the trees;
Lives through all life, extends through all extent,
Spreads undivided, operates unspent;
Breathes in our souls, informs our mortal part,
As full, as perfect, in a hair as heart;
As full, as perfect, in vile man that mourns,
As the rapt seraph, that adores and burns;
It claims all high and low, all great and small;
It fills, it bounds, connects, and equals all."

It is immaterial to what department of this globe and its surrounding elements we turn our attention, electricity is there. Wherever we witness convulsions in nature, the workings of this mighty, unseen power are there. It writes its path in lightning on the sullen brow of the dark cloud, and breathes out rolling thunder. Though cold and invisible in its equalized

and slumbering state, yet it is the cause of light and heat, which it creates by the inconceivable rapidity of its motion and friction on other particles of matter. It is the cause of evaporation from basined oceans and silvery lakes—from majestic rivers and rolling streams, and from the common humidity of the earth. It forms aerial conductors in the heavens, through which this moisture in vapoury oceans is borne to the highest portions of our globe, and stored up in magazines of rain, and snow, and hail! It is electricity that, by its coldness, condenses the storm, and opens these various magazines in mild beauty or awful terror on the world. It is electricity that, by the production of heat, rarefies the air, gives wings to the wind, and directs their course. It is this unseen agent that causes the gentle zephyrs of heaven to fan the human brow with a touch of delight—that moves the stirring gale—that arms the sweeping hurricane with power—that gives to the roaring tornado all its dreadful eloquence of vengeance and terror, and clothes the mid-day sun in light. It gives us the soft pleasing touches of the evening twilight, and the crimson blushes of the rising morn. It is *electricity* that, by its effects of *light* and *heat*, produces the blossoms of spring, the fruits of summer, the laden bounties of autumn, and moves on the vast mass of vegetation in all the varieties and blended beauties of creation. It bids winter close the varied scene. It is electricity that, by its most awful impressions, causes the earthquake to awake from its Tartarean den, to speak its rumbling thunder, convulse the globe, and mark out its path of ruin.

If we turn to man, and investigate the secret stirrings of his nature, we shall find that he is but an epitome of the universe. The chemical properties of all the various substances in existence, and in the most exact proportions, are congregated and concentrated in him, and form and constitute the very elements of his being. In the composition of his body are involved all the mineral and vegetable substances of the globe, even from the grossest matter, step by step, up to the most rarefied and fine. And, *lastly*, to finish this masterpiece of creation, the brain is invested with a living spirit. This incomprehensible spirit, like an enthroned deity, presides over, and governs through electricity, as its agent, all the voluntary motions of this organized corporeal universe; while its living presence, and its involuntary, self-moving powers cause all the involuntary functions of life to proceed in their destined course. Hence human beings and all animated existences are subject to the same grand electrical law that pervades the universe, and moves all worlds under the superintendence of the involuntary powers of the infinite Spirit.

On this principle, it will be plainly perceived, that as man is subjected to the same common law that pervades the universe, so *electricity* is the connecting *link* between MIND and MATTER. As it is co-eternal with spirit or mind, so it is the only substance in being that mind can directly touch, or through which it can manifest its powers. It is the servant of the mind, to obey its will and execute its commands. It is through electricity, that the mind conveys its various impres-

sions and emotions to others, and through this same medium receives all its impressions from the external world. It is by electricity that the mind contracts the muscles, raises the arm, and performs all the voluntary motions of this organized body. This it will now be attempted to prove.

It will be readily perceived by every one acquainted with electrical science, that if one person can find another standing in a *negative* relationship to himself, or by any process render him so, then the one, being the *positive* power, can, by producing electrical impressions from his own mind upon the other, control his muscles with the most perfect ease. This is evident, because the *positive* and *negative* forces electrically and magnetically blend, are equal in power, and paralyze each other; or, on the contrary, produce motion. This great and interesting truth can be proved to a demonstration, by experiments upon a variety of persons in every community, while they are entirely awake, and in perfect possession of all their reasoning faculties. Before proceeding farther upon this point, it would seem desirable to show, that ELECTRICITY is the CONNECTING LINK between MIND and inert MATTER, and is the AGENT that the mind employs to contract and relax the muscles, and to produce all the *voluntary* and *involuntary* motions of the body.

To make this matter plain and intelligible, it is first necessary to remark that the brain is the fountain of the nervous system, from whence it sends out its millions of branches to every part of the body. Indeed, the brain is but a congeries of nerves, and is the

immediate residence of the living spirit. This spirit or mind is the cause of all motion, whether that motion be voluntary or involuntary. It wills the arm to rise, and immediately the arm obeys the mandate; while the *very presence* of this mind in the brain, even though wrapped in the insensibility of sleep, produces all the involuntary motions of the vitals, and executes the functions of life.

To establish the fact that *electricity* is, indeed, the *connecting link* between the MIND and the BODY, it need only be stated distinctly that mind cannot come in direct contact with gross matter. The mind can no more directly touch the hand, than it can the mountain rock. The mind cannot touch the bones of the arm, nor the sinews, the muscles, the blood-vessels, nor the blood that rolls in them. In proof of this position, let one hemisphere of the brain receive what is called a stroke of the palsy. Let the paralysis be complete, and one half of the system will be rendered motionless. In this case, the mind may will with all its energies—may exert all its mental powers—yet the arm will not rise, nor the foot stir. Yet the bones, sinews, muscles, and blood-vessels are all there, and the blood as usual continues to flow. Here then we have proof the most irresistible, that mind can touch none of these; for what the mind can touch it can move, as easily as what the hand can physically touch it can move. Our proof is so far philosophically conclusive.

It may, however, be now remarked, that it is equally certain the mind can touch some matter in the body, otherwise it could never raise the arm at all. The

question, then, arises, What is that mysterious substance which the mind can touch, as its prime agent, by which it produces muscular motion? In the light our subject now stands, the answer is most simple. It is that *very substance* which was disturbed in this paralysis, and that is the nervous fluid, which is animal electricity, and forms the connecting link between mind and matter. Mind is the only substance in the universe that possesses inherent *motion* and living *power* as its two PRIMEVAL EFFICIENTS. These two seem to be inseparable, because there can be no manifestation of power except through motion. Hence MIND is the first grand moving cause. It is the *first link* in the magnificent chain of existing substances. This mind wills. This mental energy, as the creative force, is the *second link*, and stirs the nervous force, which is electricity. This is the *third link*. This electricity causes the nerve to vibrate. This is the *fourth link*. The vibration of the nerve contracts the fibre of the muscle. This is the *fifth link*. The contraction of the muscle raises the bone or the arm. This is the *sixth link*. And the arm raises dead matter. This is the *seventh link*. So it is through a chain of seven links that mind comes in contact with dead matter; that is, if we allow the creative force—the *will*—to be one link. This *will*, however, is not a *substance*, but a mere energy, or *result* of mind. To be plain, it is mind that touches electricity —electricity touches nerve—nerve touches muscle—muscle touches bone—and bone raises dead matter. It is, therefore, through this concatenation or chain, link by link, that the mind gives motion to and controls

living or dead matter, and not by direct contact with all substances. Hence the proof is clear and positive, that the mind can come in contact with, and by its volition control, the electricity of the body, and collect this subtile agent with fearful power upon any part of the system.

It is evident that the mind holds its residence in the brain, and that it is not diffused over the whole system. Were it so, then our hands and feet would think, and in case they were amputated, we should lose part of our minds. If, then, the MIND, invested with ROYALTY, is enthroned in the brain—and if the mind command the foot to move, or the hand to rise, then it must send forth from its presence an agent, as its PRIME MINISTER, to execute this command. This prime minister is ELECTRICITY, which passes from the brain through the nerves, as so many telegraphic wires, to give motion to the extremities. On this principle, how easy it is to understand the philosophy of a paralysis. The nerve, as the grand conductor of the motive power, is obstructed by some spasmodic collapse, and the prime minister cannot pass the barrier that obstructs its path. In this case, the mind, as the enthroned monarch, may WILL the arm to rise, but the arm remains motionless. But remove that barrier, the agent passes, and the arm must rise. Hence it is easily seen, that all motion and power originate in mind.

Having clearly and philosophically established the truth, that electricity, in the form of nervous fluid, is indeed the connecting link between mind and *inert* matter, the question now presents itself—If the mind continually throws off electricity from the brain by its

mental operations, and by muscular motion, then how is the supply kept up in the brain—through what source is it introduced into the system, and how conveyed to the brain? The answer is, that through the respiratory organs electricity is taken into the blood at the lungs, and from the blood it is thrown to nerves and conducted to the brain, and is there secreted and prepared for the use of the mind. It will be impossible, however, to argue this point fully unless at the same time the philosophy of the circulation of the blood is considered. It will here be contended that the heart does not circulate the blood at all, either on the hydraulic, or any other principle.

The philosophy of the circulation of the blood is one of the grandest themes that can be presented for human contemplation. While discussing this matter, it will be clearly made to appear how electricity is gathered from the surrounding elements, carried into the system and stored up in the brain to feed the mind with impressions. Let it be distinctly understood, that when speaking of the *electricity*, *galvanism*, and *magnetism* of the human system, or of the *nervous fluid*, one and the same thing is meant. But before proceeding to notice the philosophy of the circulation of the blood, and the secretion of the nervous fluid, it will be proper to first make a few observations in relation to the *nerves* and *blood-vessels*.

It has already been stated, that the brain is the fountain of the nervous system, and that both its hemispheres are made up of a congeries of nerves. They both pass to the cerebellum; and the spinal cord,

continued to the bottom of the trunk, is but the brain continued. In the spinal cord, which is the grand conductor from the brain, is lodged the whole strength of the system. From this spinal cord, branch out thirty-two pair of nerves, embracing the nerves of motion and those of sensation. From these branch out others, and others again from these; and so on till they are spread out over the human system in network so infinitely fine that we cannot put down the point of a needle without feeling it—and we cannot feel, unless we touch a nerve. We see, therefore, how inconceivably fine the nervous system is. In all these millions of nerves there is no blood. They contain the electric fluid only, while the blood is confined to the veins and arteries. It is here that the blood-vessels pass round among the convolutions of the brain, and through them the blood freely flows to give that mighty organ action; but in the nerves themselves there is no blood. They are the residence of the living mind, and its prime agent, the electric fluid.

It is hardly possible to treat of the circulation of the blood, without briefly adverting to the subject of respiration, and the composition of the air we breathe, which is computed to consist of twenty-one parts of OXYGEN and seventy-nine parts of NITROGEN in every one hundred by volume. Electricity, as a universal agent, pervades the entire atmosphere. We cannot turn the electric machine in any dry spot on earth without collecting it. Oxygen is that element which sustains flame and animal life. Neither can exist a moment without it: while nitrogen, on the contrary,

is a mere negative substance, and both are at once extinguished in it. The atmosphere, in this compound state, is taken into the lungs. The oxygen and electricity, having a strong affinity for moisture, instantly rush to the blood, while the nitrogen is disengaged and expired. The blood, being oxygenized and electrified, instantly assumes a bright cherry-red appearance, and by this energizing process has become purified and prepared for circulation. The lungs, and the blood they contain, are both rendered electrically *positive;* and we know that in electrical science two positives resist each other and fly apart. Hence the lungs resist the blood and force it into the left ventricle of the heart. The valve closes and the blood passes into the arteries. Hence arterial blood is of a bright cherry-red hue. It is by the *positive* force of electric action, propelled through every possible ramification of the arterial system till all its thousands of minute capillary vessels are charged. Along these arteries and all their thousands of capillary branches are laid nerves of involuntary motion, but no nerves whatever attend the veins. Why is this so? Why is it, that nerves, like so many telegraphic wires, are laid along the whole arterial system in all its minute ramifications, but that none are laid along the venous system? The question here arises—Why do nerves attend the arteries, while none attend the veins? The answer is that nerves are laid along the arteries to receive the electric charge from the *positive* blood that rolls in them, which charge the blood received from the air inspired by the lungs. But as the venous blood is *negative,* it has no electricity to

throw off, and hence needs no attendant nerves to receive a charge—because that very electric charge, which the blood receives from each inspiration at the lungs, is thrown off into the nerves by friction, as it rolls through its destined channels in crimson streams. At the extremities of the arterial system—at the very terminus of its thousands of capillaries, the last item of the electric charge takes its departure from the positive blood, escapes into the attendant nerves, through them is instantly conducted to the brain, for the use of the mind.

The arterial blood, having thrown off its electricity as above described, assumes a dark—a purplish hue. It enters the capillaries of the veins, which are as numerous as those of the arteries. The blood is now *negative*, and as the lungs, by new inspirations, are kept in a *positive state*, so the venous blood returns through the right ventricle of the heart to the lungs, on the same principle that the *negative* and *positive* forces rush together. There it is again electrified and oxygenized, changed to a bright cherry-red colour, is again rendered *positive*, and is thus purified and prepared once more for arterial circulation. We now clearly perceive that it is electrically the blood circulates, and electrically it recedes from, and returns to, the lungs through the two ventricles of the heart. The heart does not circulate the blood at all, as physiologists contend. The heart is the SUPREME REGULATOR of this sublime and constantly ebbing and flowing OCEAN of crimson life, with all its majestic rivers and frolicking streams, and determines with exactness how rapidly the whole shall flow.

CHAPTER III.

From the arguments already offered, it will be clearly perceived by every philosophic mind, that the circulating system is in reality *two* distinct systems. The *first* is the ARTERIAL SYSTEM, that carries the *positive blood*, which is, as before stated, of a bright cherry-red colour, and is ever flowing from the heart to the extremities. The *second* is the VENOUS SYSTEM, that carries the NEGATIVE BLOOD, which is of a purple colour, and is ever flowing from the extremities to the heart. To these two circulating systems, the heart, with its two auricles, two ventricles, and valves, is exactly adapted, so as to keep the *positive* and *negative* blood apart, and to regulate the motion of both. And it will be perceived that the nervous system most perfectly corresponds with what has been said of the circulating system. That is, the nerves of involuntary motion are laid along the arteries to receive the charge of electricity from the *positive* blood that flows in them. These views of the circulation of the blood are strengthened by the fact, that the blood contains a certain portion of iron; and we well know that iron becomes a magnet only by induction, and loses its magnetic power the moment the

electric current passes from it. Hence the blood, through the agency of the iron it contains, can easily assume a *positive state* at the instant it receives the electric charge from the air at the lungs. It can then pass into the arteries, and by friction throw off its electricity into the nerves, and again assume a *negative state* as it enters the veins.

The position which many assume, that the heart circulates the blood on the hydraulic or vacuum principle, seems not to be founded in truth. And that the heart, in accomplishing this, exerts a force, as they contend, of more than one hundred thousand pounds, is too preposterous to be believed. It is granted that the heart is the strongest muscle in the human system; but who can for one moment believe that its motive power is equal to fifty tons? The heart, as has already been observed, does not circulate the blood at all; nor on the contrary does the blood cause the heart to throb. The heart and lungs both receive their motions from the cerebellum, which is the fountain and origin of organic life and involuntary motion. Hence the involuntary nerves from the cerebellum throb the heart and heave the lungs, and the electricity contained in the air they inspire, circulates the blood and supplies the brain with nervous fluid, as has already been explained.

Perhaps, however, the inquiry may here arise, What proof is there that the involuntary nerves from the cerebellum throb the heart and heave the lungs, and that the blood is not made to circulate from the same cause?

This double interrogatory is easily answered. Insert, for instance, a surgical knife between the joints of

the vertebræ, and cut off the spinal cord below the lungs and heart—all the parts below this incision will be so completely paralyzed, and voluntary motion and sensation so entirely destroyed, that we have no power to move the limbs by any volition we may exert; nor have we any power to feel, even though the paralyzed limbs should be broken to pieces by a hammer, or burned with fire. Yet in these immovable and unfeeling parts the blood continues to circulate as usual through the veins and arteries. This is proof positive that the blood is not made to flow by any power whatever invested in the cerebellum, but, as before proved, by the *positive* and *negative* forces of that electricity contained in the air inspired by the lungs. But let the spinal cord be severed above the lungs and heart, and both will be instantly paralyzed and cease their motions; yet the last inspiration taken in by the lungs will cause the blood to circulate till it floods the right ventricle of the heart with venous blood, and empties the left ventricle of its arterial blood. This is proof the most irresistible, that the HEART AND LUNGS ARE MOVED BY AN INVOLUNTARY NERVOUS FORCE ORIGINATING IN THE CEREBELLUM, while the blood is circulated by the *positive* and *negative* forces of that electricity which is taken in with the air at the lungs. The lungs merely act as a double force-pump to bring in the surrounding atmosphere, extract from it a proper supply of the vital principle to feed the bright and burning flame of life, and to reject and expire the dregs unfit for that end. This is perhaps as much as it is necessary to say in relation to the circulation of the blood, and the constant

secretion of the nervous fluid from the arterial blood to the brain.

The attention of the reader is now directed to the philosophy of disease, which will be briefly considered. It is generally supposed by medical men, that there are innumerable causes for the various diseases in existence, and that even one disease may have many causes in nature to produce it. But it will here be contended, that there is but one grand CAUSE for all diseases, and this is the disturbing of the vital force of the body. There is in every human being a certain amount of electricity. This is, as already stated, the most subtile and fine material in the body; is the power, as has been shown, that moves the blood; and is the agent by which the mind, through the nerves, contracts the muscles and produces motion. And as all the convulsions and operations in nature and in man invariably begin in the invisible and finest substances in being, and end in the most gross, so electricity, in the human system, is the cause of all the effects there produced, whether salutary or otherwise. When this electricity is equalized throughout the nervous system, the blood will also be equalized in its circulation, and the natural result is health. But when it is thrown out of balance, the blood will, in like manner, be also disturbed, and the natural result is disease; and the disease will be severe or mild in the same ratio as the vital force is more or less disturbed.

It is true that medical men are much inclined to examine the patient's pulse, and watch the movements of the blood. They seem to think that nearly all

diseases originate in the blood, and hence, under this impression, hundreds of specifics, or nostrums, have arisen to purify the blood, as though it contained some foreign properties that rendered it impure, and that these, by some medical treatment, must be extracted or removed from the system. But all this is fallacious, as the blood contains no foreign properties to render it impure. The blood becomes impure only through a disturbed circulation. It can be purified by no other substances in being, except what are contained in the air at the lungs. These are oxygen and electricity. The whole blood in the body must, every few moments, be passed through the lungs to be purified and preserved from putrefaction. If the circulation, in any part of the body, be obstructed, or thrown out of balance, so that the blood cannot pay its timely visit to the lungs, it must become extravasated and impure. If, in any part of the body, there is a complete obstruction, so that the blood is entirely retained, then inflammation, ulceration, and suppuration must ensue.

The operations of the mind, and the nervous system of man, have been too much overlooked by medical men, who have paid great attention to the blood, and to the more gross and solid parts of the body. But it is evident that disease begins in the electricity of the nerves, and not in the blood. Electricity is the starting point. From thence it is communicated to the blood, from the blood to the flesh, and from the flesh to the bones, which are the last affected. It begins in the finest, and ends in the grossest particles of the system. The unseen are the starting powers.

It has already been remarked that the brain is the fountain of the nervous system, and sends forth its millions of branches to every possible part and extremity of the body. This nervous system is filled with electricity, which is the agent or servant of the royal mind, who, as monarch, holds his throne in the brain. From thence the mind, by its volitions, controls one half of the electricity of the system. It controls all that is contained in the voluntary nerves, but has no such control over the other half, which is confined to the involuntary nerves.

Though there is but one grand cause of disease, *which is the electricity of the system thrown out of balance*, yet there are, nevertheless, *two modes* by which this may be done. It may be done by mental impressions. And so it may be done by physical impressions from external nature. The manner in which diseases are produced by *mental impressions* will first be noticed.

Millions of our race have been swept from the light of life to the darkness of death by various diseases caused by mental impressions. Misfortune and distress have fallen upon many a father, a mother, and many a child. They have shut up in their bosoms all these mental woes, and brooded over their misfortunes in secret, concealed grief. Melancholy took possession of the heart, the vital force was disturbed, the system was thrown out of balance, disease was engendered, and they went to their graves.

For example, the action of the mind of a public speaker calls the electricity of the system from the

extremities to the brain. The blood follows it. His feet being robbed of their due proportion of the vital force, are, in the same ratio, cold, and hence, this is, so far, disease. And unless he ceased speaking, and suffered a reaction to take place, it would bring him to his grave.

A man accumulates a fortune of two hundred thousand pounds. He loses one half of it, and is hurled in distress. He broods over his misfortune. The mind is in trouble; it shrinks back on itself. The electricity of the system, this servant of the mind, leaves the extremities and approaches the brain, the throne of the master. The blood follows on; the excitement becomes great, and he believes he shall die in an almshouse. He is a monomaniac. Suppose he now loses the other half of his fortune, and his mind will become involved in still greater distress. This mental action calls an increased quantity of electricity, that is, of nervous fluid, to the brain, and an equal amount of blood follows on. He is now entirely deranged, and his feet are incessantly cold, because the brain has robbed them of their due proportion of the vital force. Now it will be perceived, that if these forces are dispersed from the brain, and the circulation equalized, that his reason will be restored. There is not too much of blood and electricity in the system, but there may be too much in any one department of the system. Now suppose him once more in possession of his reason. Now bring him intelligence that his darling child is crushed to atoms. The mind suddenly shrinks back on itself; the electric, or nervous fluid instantly darts

to the brain, like a faithful servant to see what distresses the master. The blood as suddenly follows the servant. The storm rages, and a fit ensues. Let the news be still more startling, and the congregated forces will, in the same ratio, be increased upon the brain, and he drops a corpse! So we perceive that, in all these instances, there is but one cause of disease. The only difference we have witnessed in the effects produced, was a gradually increased action, occasioned by an increased power of the same cause, even from the slightest excitement, gradually up to that fearful point where it produced instant death.

The remarks thus far made have been confined to effects produced upon the brain by the electro-nervous fluid and blood, which were called there by the various emotions, passions, and sensations of the mind. But that these forces should invade the territory of the brain, and produce such results, depends, however, upon the condition of the brain as to its comparative physical strength with the other parts of the system. In this view of the subject, had the same misfortunes as to loss of property above stated been visited upon this same individual when his brain was firm, a different disease would have been the result. Suppose that his brain, as to its physical structure, had been strong and firm, but that his lungs had been weak. Now let the same misfortunes befall him. His mind again shrinks back on itself; the electro-nervous force, as before, starts for the brain, but is not allowed to enter this palace of the distressed monarch, and it stops at the lungs, the weakest and nearest post. The blood next

follows on in pursuit of the servant, and takes up its abode with him. Inflammation sets in, and, if the trouble of the monarch continues, tubercles form, ulceration takes place, and death ensues. It was consumption.

But suppose the lungs had been strong, and that the stomach had been, by some trivial circumstance, rendered the weakest part. The electro-nervous fluid and blood would, in this case, have gone there, and taken possession of that post. Inflammation, canker, with morbid secretions would have ensued, and even ulcers might have been formed. The digestive organs would have been weakened, and dyspepsia, with all its horror of horrors, would have been the result. If the liver had been the weaker spot, the same forces, under the same mental impressions, would have congregated there, and produced the liver complaint. If the stomach and liver had both been strong, and the spine weak, it would have been a spinal complaint. If all these had been physically firm, and the kidneys weak, the same forces would have produced a disease of the kidneys. And if all in the regions of the brain and trunk had been firm, and a mere blow had been inflicted upon the hip, knee, or any part of the lower limbs, the electro-nervous force and the attendant blood would have gone there, and produced the white swelling, or any other species of inflammation and distress. So we perceive, that the same CAUSE, under MENTAL IMPRESSIONS, may produce any of these diseases. As to the character of the disease, it merely takes its name from the organ or place in the body where it may

locate itself. Hence diseases differ one from another only as the various diseased organs, their motions, secretions, and functions may differ—or as the various located parts of the body invaded by disease may differ from each other. But the producing CAUSE of all these diseases is one and the same. It is the ELECTRO-NERVOUS FLUID of the body.

Having said all that at present seems to be necessary in relation to the disturbing of the nervous force by MENTAL IMPRESSIONS, we will now turn our attention to the disturbing of the nervous force by PHYSICAL IMPRESSIONS.

As the mind in distress—in secret melancholy and grief—has disturbed the nervous force, which has engendered disease by calling the blood and other fluids of the body to its presence, and thus sent millions to their graves—as it has produced all the diseases we have mentioned and even hundreds more—so the same diseases and hundreds more are also produced by the nervous force when it is disturbed by *physical impressions* from external nature.

It is true that *mental* and *physical* impressions may be termed *causes* of disease; but it will be remembered, that medical men contend that there are *remote* and *proximate* causes of disease. The latter are now being considered, and it is contended that there are not thousands of *proximate* causes, but only *one* grand PROXIMATE CAUSE of disease, and this is the disturbing of the nervous fluid, or throwing the electricity of the system out of balance; and that diseases begin in the electric force of the nerves, and not in the blood. They

begin in the invisible and finest substance of the body, and end in the gross. Hence the same cause that produces monomania, produces entire derangement, fits, headache, and even the common excitement of the brain in a public speaker. The same cause produces consumption, dyspepsia, liver complaint, spinal affections, pleurisy, cholera, dysentery, inflammations, fevers, &c. This subtile, *disease-causing* principle, is the ELECTRO-NERVOUS FLUID. When equalized throughout the system, it is the cause of health, for it controls the blood and other fluids, and when thrown out of balance, it is the cause of disease. Hence the minister of health and sickness, of life and death, is within us, and is one and the same principle. As electricity is the efficient cause of all convulsions, calms, and storms in nature, and of all the pleasing or awful phenomena that transpire in earth, air, or ocean, or in the vegetable or mineral kingdom, so, as man is but an epitome of the universe, it is electricity in the form of nervous fluid that produces all the convulsions, calms, and storms in his own system.

We have seen the various secret stirrings of electricity in the human nerves under *mental impressions*, in producing insanity, fits, consumptions, &c. We witness the same mournful results when that subtile power is moved by *physical impressions*. A wet foot, for instance, may throw the electro-nervous fluid out of balance, and this subtile force may suddenly check the lacteal or other secretions, and also produce insanity, or fits, or by locating itself upon the lungs, it may produce consumption. The fact is, that the electro-ner-

vous fluid, when disturbed at the extremities, or on the surface of the body, always retires inward, and locates itself upon the weakest organ, or upon some weak portion of the vitals—the blood follows, and disease is the result. This point has been fully explained when noticing mental impressions, so there is no occasion here for particularizing. It may simply be stated, however, that a sudden exposure to a damp air, sitting upon a cold rock, lying upon the ground and suddenly falling asleep, or sitting with the back to a current of air while in a perspiration—all, or any of these, may at times disturb the electro-nervous force, and arouse this *disease-causing power* from its slumberings. This may throw the blood out of balance, and by locating themselves upon the weakest organ or weakest part of the system, engender disease. Or the nervous force may be disturbed by eating or drinking too much or too little of wholesome substances, or by eating and drinking unwholesome or poisonous substances, and all these correspondent diseases produced.

It is now clearly seen how *mental* and *physical* impressions disturb the electricity of the system, which locates itself upon the weakest organ, calls the blood to its aid, and brings disease, pain, and death. So we perceive, that the same nervous fluid which, when equalized, produces health, is, when thrown out of balance, the cause of disease. The whole electricity of the nerves is, of course, one hundred per cent. Fifty per cent. is under the voluntary control of the mind, and belongs to the voluntary nerves, and the other fifty per cent. is under the control of the involuntary powers

of the mind, and belongs to the involuntary nerves. Now if the whole fifty per cent. of either of these forces, which when equalized is health, should be suddenly collected upon any one organ, it would be the destruction of that organ. If the mind, on hearing bad news, or by some sudden distress, should call the whole fifty per cent. of electricity under its control to the brain, apoplexy and death must ensue. This would be done by a *mental impression* on the voluntary nervous force, causing the mind to shrink back on itself and become passive. But the same melancholy result could be produced by eating, drinking, or some other *physical impression* on the involuntary force over which the mind has no such control. Hence it will be understood, that all diseases, originating under mental impressions, are produced by the fifty per cent. of voluntary nervous force. But those diseases, originating under physical impressions, are produced by the fifty per cent. of involuntary nervous force, and over which the mind has no control.

If either of these electro-nervous forces, to a certain amount, should be called to a muscle, it would be pain. If called to a still greater extent, it would be inflammation; and if the whole fifty per cent. were called there, it would be mortification, and the ultimate and absolute destruction of the muscle. The same result would follow in case either of these forces were called to any organ in the system. It would be the destruction of that organ.

There are three kinds of pain: *First*, a pain produced by negative electricity, which attracts the blood

to the spot, and is ever attended with inflammation. *Second*, a pain produced by positive electricity, which repels the blood, and, though equally severe, is never attended with inflammation. *Third*, a pain produced by the confused mixture of the two forces, and consists in a burning, itching, or prickly sensation, and is often very distressing.

A few hints have now been given on the philosophy of disease, which are of course novel; but they are, nevertheless, as interesting and important to the welfare of our race, as they are novel and strange. Medical men have ever noticed the great effect that the mind has upon the body, both as it regards a disastrous or salutary result. Hence they keep up the brightest hopes of their patients as to recovery, and carefully guard every one against uttering to them a word of discouragement. These effects they have seen, but not understanding the connecting link between mind and matter, the true philosophy of disease has been by them entirely overlooked, and in relation to this science they may after all cry "*humbug.*" But this will avail them nothing, for truth, after all, will stand unshaken, and be appreciated by after generations, when opposition shall have been interred, with no hope of its resurrection. In view of our subject, so far as it regards mental impressions, we see the supreme importance of maintaining a reconciled state of mind. Equanimity of mind is the parent of health, peace, and happiness, and the noblest test of the true Christian. When we see thousands always restless, complaining of cold and heat, and wet and dry—complaining of their own con-

dition, and finding fault with others, and dissatisfied with the events of Providence—we need not marvel that so many complain of indisposition and disease. This state of mind produces them.

CHAPTER IV.

When we reflect how extensive a field the philosophy of disease naturally occupies, and how vast a range we must take in order to inspect minutely its several parts, it will then be seen that the remarks already offered, have been brief in comparison with the vastness of the subject. It is to be hoped, however, that the views presented are understood, and that the importance of the doctrine of mental and physical impressions, in relation to disease, will be clearly seen and fully appreciated by all. If founded in immutable truth, it will survive the crush of empires and the revolution of ages.

Having brought forward the PHILOSOPHY OF DISEASE in the last chapter, we now turn to the RATIONALE OF ITS CURE in this.

In discussing the doctrine of mental impressions, it has been clearly and irresistibly proved that the mind by shrinking back on itself in fear, melancholy, and grief, in the day of adversity, misfortune, and distress, can disturb the electro-nervous fluid, and allow it to concentrate itself upon any organ of the body and engender disease. If, then, the mind can disturb the

equilibrium of the nervo-electric force and call it to some organ so as to produce disease, then the mind can also disperse it, equalize the circulation, and restore health. This it can do by a mental impression, admitting the impression to be sufficiently great. For example: A man in possession of five thousand pounds is riding homeward on horseback in the evening. He is within a mile of his house. He is weary, and his head aches so severely that he is obliged to walk his horse. He is so indisposed and faint that he can but just keep his saddle. From a lonely dismal spot at the road side, a robber springs, and seizes his horse's bridle—presents a pistol, and exclaims, "Your money, or your life!" The rider, with a loaded whip, and at the impulse of the moment, suddenly strikes the robber's arm. This causes the pistol to discharge, and adds to the confusion of the moment. The rider, scarcely knowing what he is about, puts spurs to his horse. He darts off at the top of his speed. Before he is aware, he is at his own door. He dismounts and finds himself safe. The vital force is driven to the extremities, and his hands and feet are warm. Where is his headache now? It is gone. The supreme impression of his mind drove the electro-nervous fluid from his brain—the blood followed it—a reaction took place, and he was well. Is there any thing strange in this? No! Then there is nothing strange in this science, for it is the curing of diseases by the doctrine of impressions.

Let it be distinctly understood how this power operates. Remember, mind touches the electro-nervous fluid, moves it—and this fluid moves the blood. Elec-

trical-Psychology is the doctrine of impressions, and the same disease that mind, or even physical impressions can cause, the mind can remove, if the patient be in the Psychological state; because mental impressions to any extent we please can be produced upon him. It is therefore immaterial from what source a disease may arise, or what kind of a disease it may be, the mind can, by its impressions, cause the nervous fluid to cure it, or at least to produce upon it a salutary influence. If exposure to heat or cold, dampness or dryness, or to any of the changing elements, should call the nervous fluid to the lungs, and disturb the circulation of the blood, so as to produce inflammation, the mind could disperse and equalize it, and thus effect a cure as readily as though this inflammation of the lungs had been brought on by melancholy and grief, or by any other mental distress. Or if these exposures had caused any other disease or pain in the system, the mind could have had the same power to remove it, as though it had been caused by mental distress. Or if by eating, drinking, or by sedentary habits, dyspepsia had been produced, the mind could have had the same power to produce a salutary result, or even to cure it, as though it had been caused by mental distress. It is not meant that a cure can be effected by the electro-nervous force, *through mental impressions*, if there be any organic destruction of the parts diseased. The consumption, for instance, could not be cured if the lungs were ulcerated; sight could not be restored if the optic nerve were destroyed; nor could deafness be removed if the auditory nerve were destroyed. In these cases, even, medical

remedies, it must be granted, would be of no avail, because there is no foundation on which to build. In all that has been said, or may be said, in regard to cures, reference is only made to curable cases. It is meant that the fifty per cent. of electro-nervous force, under the control of the mind, could effect a cure where there is no organic destruction, and where there is, at the same time, a sufficiency of vital force left to build upon, so as to be able to produce a sanative result. Nor is it meant to be understood that this science alone can at all times cure. It may require medicines to co-operate with it. As diseases are produced through mental and physical impressions, so through mental and physical impressions they must be cured.

Medicine produces a physical impression on the system, but never heals a disease. If a disease were ever healed through medicines, it was healed by the same sanative power as though it had been done by a mental impression in accordance with the teachings of Electrical-Psychology. This is evident; because the sanative power is in the individual, and not in the medicine. Medicines and mental impressions only call that sanative principle to the right spot in the system so as to enable it to do its work. The following example will explain this particular point:—

A person enters a garden and sees a peach-tree with its fruit not fully grown, but so heavily laden, that one of its limbs is partially split from the trunk. The gardener is aware that if it be neglected till the fruit grows to maturity, the limb will be entirely parted from the tree and die. He carefully raises the limb till the

split closes, and puts under it a prop to keep it to its place. He winds canvas around the wounded part, and over this he puts tar. Now there is certainly no healing principle in the prop—there is none in the canvas —nor is there any in the tar. The prop merely sustains the weight of the limb, and keeps the split together; the canvas is wound around it to prevent the tar from entering the split; and the tar was applied to protect the whole from the air, rains, and external elements; while the tree is left to the *inherent operations of its own sanative principles.* The sanative principle being in the tree, it must heal itself. So the healing principle is in man, as much so as it is in the tree. The healing principle in the tree is the *invisible electro-vegetative fluid.* This moves and equalizes the sap, and the sap affects the wood. It is the electricity of the tree that does the work; and this electricity is under the control of its vegetable life. So the healing principle in man is the *invisible electro-nervous* fluid. This moves and equalizes the blood, and the blood affects the flesh. It is the electricity of the system, under the control of the mind.

The position is incontrovertible, that the healing principle is in man. Admitting it to be electricity, or the electro-nervous fluid of the system, it is then easily seen that there is no healing principle in medicine, and it is also understood what effect medicine must have upon the system in order to produce a salutary influence. It must equalize the electricity, as before remarked, and call it to the proper spot, so as to enable it to do its healing work. Hence, if the mind

can so operate upon the fifty per cent. of the electro-nervous force under its control, as to equalize it, then it follows, as a matter of course, that the same healing result will be obtained as is effected by medicine. In either case there is no difference in the healing power. In both instances it is the same. The only difference is, that in the one case the healing power was made to act by the mind, which produced its *mental* impression, and in the other case by the medicine, which produced its *physical* impression.

It may now be asked, If medicine has no healing property in it, then how can an emetic remove impurities from the stomach by vomiting the patient? It never does it. Let this point be distinctly understood. The vomiting principle is not in the emetic, but in the patient. It is the electricity of the system. The electro-nervous fluid of the brain is the vomiting principle. Let us understand the philosophy of this. Emetics, whether *mineral* or *vegetable*, possess those peculiar chemical properties that cause immense secretions. This effect is the whole secret of their power. An emetic taken into the stomach, produces secretions most freely from the glands of the stomach, from the mucous membrane of the lungs, from the glands of the trachæ, and from the glands of the mouth and tongue. It robs them of their moisture, which is continually accumulating upon the stomach. The parts being robbed of their moisture, by this artificial action, the electricity from the nerves follows it, because electricity has a strong affinity for moisture. When a sufficiency of the electric force is drawn from the brain, and the blood having in

the same ratio followed it, the countenance becomes pale—an expansion and collapse of the stomach takes place, and vomiting is the result. This is its philosophy. In proof of the fact, electricity cannot be gathered in damp weather. The moisture, for which it has a strong affinity, holds it.

After all that has been said of medicine and its operations, it may yet be supposed that it possesses some healing principle, and that the emetic does vomit the patient. Why then will it not vomit a dead man? The answer is, because the vital force is gone, and the emetic is powerless. But why will it not vomit the man when he is worn out with disease and near his end? The answer is, because the vital force in the man, on which vomiting depends, is wasted; and as it does not exist in the medicine, so the emetic, in its chemical action having no material to work upon, or to call to its aid, is powerless.

If this is not satisfactory in the settlement of the question, whether the vomiting principle is in the medicine or in the patient, we will pursue the subject still farther. Suppose while eating strawberries and cream, a sensitive lady is told that she has taken into the stomach a worm, or even a fly—she stops eating, and in a minute she vomits freely. How is this, when she has swallowed, in fact, neither worm nor fly? The answer is, that the vomiting principle is in the brain. She believed that she had taken into the stomach what was stated; she kept her attention steadily and most intently upon it—and the mind threw the electro-nervous force from the brain to the stomach, until there

was a sufficient quantity to produce an expansion and collapse of the stomach, and cause vomiting. Now the vomiting in this case and in the case of the emetic was occasioned by one and the same thing, and that is the electro-nervous fluid. The only difference in the two cases is, that the emetic called it from the brain by a *physical* impression, and the mind forced it from the brain by a *mental* impression.

If the vomiting principle is not in us, why then does it turn the stomach to see an animal eating any thing very filthy, like the dog returning to his vomit? If this principle is not in us, how can it produce nausea? How can the motion of a vessel, and sometimes even the motion of a carriage, produce vomiting, unless it exists in the nervous force of the brain? Why will a fall, or blow upon the head, produce it?

The same is true in relation to cathartics, which excite the secretions of the glands, but of other glands than those affected by an emetic. A cathartic excites the secretions of the mucous glands of the alimentary canal. This draws the electric action from the brain, but mostly from the nerves on the surface of the body there, and produces its results. The action and operation of emetics have been thus particularly noticed, as this one hint is sufficient to lead any reflecting mind to a correct impression of the relation in which medicines stand to the human system, they are the mere props and supports of some weak part, to aid nature in restoring herself to health and vigour. A cathartic, taken into the stomach of a very sensitive individual, will produce the result of an emetic; and an emetic, too long

in effecting its end in the first stomach, will, after passing the duodenum, produce the result of a cathartic in the second stomach.

Sufficient has now been said in relation to the curing of diseases by the ELECTRO-NERVOUS FORCE, and it has clearly been shown how this force can be made to act by mind, or by medicine. A few remarks upon the means of avoiding disease and preserving health may not be inappropriate, and the following are therefore submitted.

In order to preserve health, *the body should be kept clean, and the mind pure and calm.* There are extremes in every thing, and these should be carefully avoided. The body should be carefully washed all over, or bathed, except the head, in water moderately cool. No soap should be used in either case, and the process should not occupy more than *three* or *four* minutes. It should be briskly rubbed with a coarse towel, and mostly downward, so as not to disturb the minute scales that cover the pores. In cold weather, colder water should be used than in moderate weather. Indeed, the water should be about the temperature of the elements. But in freezing weather the body should be merely immersed, and almost immediately extricated, and the washing process should not occupy more than a moment of time. In cold weather, twice per week is sufficient; and in warm weather, every alternate day is abundant, in ordinary cases. Too frequent washings and bathings, and of too long continuance, to persons in ordinary health, is deleterious, as it destroys too much of the natural oil of the skin, which the Creator

has supplied to give it a soft and silky texture. The system of hydropathy has great force, if rightly managed. In cases of heat, or inflammation, warm water should be applied, and the reaction would be coolness; and in cases of cold feet, they should be washed on going to bed each night in cold water, till they remain continually warm. The coldest water will extract the frost from a frozen hand, whereas if it were immersed in the warmest water that could be borne, it would perhaps destroy it, so as to render even amputation necessary. But if the hand be burned or scalded, immersing it in the warmest water that can be borne, or holding it to the fire, will produce a salutary result, even though the remedy be a harsh one. On this principle, you see the inconsistency of cold water applications, and even of ice to the head in brain fevers, or where there is a severe inflammation of the brain, occasioned by a fall, a blow, or any concussion.

Our bodies are made up of the elements, and, as has already been observed, are an epitome of the universe. In order to ensure perfect health, we should subsist entirely upon the provisions, whether vegetable or animal, that are produced in that part of the earth where we were born and reared, or in that part of the earth where we intend to spend our days. And, moreover, our wearing apparel should also be the product of the same section where we live. Cotton should never be worn where the snow covers the earth, or in that part of the earth's latitude where it cannot be raised. Hemp, flax, cotton, wool, and silk, may be worn with perfect safety in those latitudes of the earth's surface where they can

be cultivated. The Creator's works are perfect. He has established complete harmony between the vegetables, and the soil where they grow, and the climate that fostered their existence, and warmed them into life. He, therefore, who eats the food belonging to his own latitude, who drinks the water that gushes from his own springs, and wears the clothing produced in his own climate, establishes a perfect harmony and aptitude between his own body and the surrounding elements.

The truth of this will appear perfectly clear, if we have a correct understanding of inuring ourselves to another climate entirely different from that to which we have been accustomed.

The mineral kingdom lays a foundation for the vegetable, and the vegetable for the animal kingdom. It is therefore perfectly clear that no animals could have had an existence till there were vegetables, because an *animal* is but a *vegetable* of the *second* growth. Each latitude of the globe has vegetables peculiar to itself, and these make up all the varieties that exist on earth. But the same species of vegetables differ from each other in different latitudes, as far as the climates and elements or soils may differ from each other. An apple, pear, or peach, grown in forty degrees north latitude, differs considerably from the same fruit raised in thirty degrees north latitude. This is certain, because it is the result of surrounding elements that gave it being. The same may be said of corn, wheat, and rye in different latitudes. And as animals are but vegetables of the second growth, hence the same

animals vary in accordance with their latitudes. The beef, mutton, and pork, raised in thirty and forty degrees north latitude, are therefore unlike, each being adapted to its own climate and the vegetables that sustained them.

It has already been stated that our bodies are made of the water, the vegetables, and animals upon which we subsist, and are adapted to the climate and surrounding elements where we were born and reared. Our bodies are continually wasting away, and by food and drink are continually repaired. We lose the fleshy particles of our bodies about once a-year, and the bones in about seven years. Hence in seven years we have possessed seven bodies of flesh and blood, and one frame of bones. We have not now, in all probability, a particle of flesh and bones we had seven years ago. The water we have drank, and the flesh and vegetables we have eaten, having made up the component parts of our bodies, cause us to hanker and long for the same substances of which our bodies are composed. Like substance in us calls for like substance without, to supply the waste of the system. This is habitude.

Now suppose we suddenly change our climate from forty to thirty degrees north latitude. The air, water, fruits, vegetables, and flesh all differ. The old particles composing our bodies, and brought from forty degrees north latitude, fly off as usual. This produces hunger and thirst, and we supply our wants by the water and food of thirty degrees north latitude, and continue for weeks to do so. This creates a conflict

between the old substances of our bodies and the new flesh and blood continually forming, throws the electro-nervous force out of balance, and engenders disease. If we live and struggle on for about seven years, we become ACCLIMATED, because our old flesh and bones, formed by the substances of one latitude, have disappeared, and our entire systems are made up of the substances of another latitude. Hence we see the danger of changing our positions on the globe to any great extent, which may, however, in some instances, prove beneficial to the constitution. Such is the PHILOSOPHY of being ACCLIMATED.

In view of what has now been brought forward, it will be clearly perceived, that we should confine ourselves to the water, fruits, grains, and animal food, and even to the medicines produced in that climate where we live, and reject those of distant latitudes and foreign climates. To drink tea and coffee, and eat oranges, lemons, citrons, pine-apples, and the productions of all parts of the globe, is like changing, in some measure, our climate for another, or for several others, and thus keeping up a continual conflict between the elementary particles that are constantly entering the composition of our bodies. There is an incessant war waged between the climate where we live, and the productions of another region, and those of our own. To all this, add the clothing of other distant climes to be worn by us, and who can marvel that almost every man, woman, and child is complaining of some indisposition, or else groaning under disease and pain. Let us abandon luxuries of foreign growth; avoid dissipation; keep our

bodies clean; our minds calm and contented; eat the productions of our own climate; drink the clear crystal water of our own spring; wear the flax, hemp, cotton, or wool that is raised in our own latitude; take all the rest of sleep that our nature and temperament require; have our hours of study, labour, exercise, and serious contemplation all regulated; and be temperate in all things. Follow these directions, and no doctor will enter our dwellings professionally.

It is impossible that the Creator could have erred in adapting all the fruits, grains, and other vegetable substances to each latitude of the earth, so that man and other creatures can subsist there in health, peace, and happiness. And man no more requires the products of other climes to increase these blessings, than the animals around him, who find not only their food and drink, but even their medicines produced by the soil on which they tread, without resorting to foreign importations. At the novelty of these ideas many may smile, but they are based upon immutable truth, and established, constituted, and sustained by HIM who founded the pillars of strength and beauty that support the fabric of nature, and must stand till they shall fall.

CHAPTER V.

In the commencement of chapter third, a very brief and general survey of the powers and operations of electricity throughout the empire of nature was noticed. We saw its secret workings, and its alternately sublime or awful manifestations. But all these operations and convulsions, however magnificently grand, will appear but as the drop of the bucket to the fountain, when compared with the Unseen Power that stirs the universe. Electricity, so swift in its movement as to rival the lightning glance of thought, and so inconceivably awful in its rending force, as to convulse the globe to its centre, is yet as nothing, and less than nothing, compared with that Eternal One who arms it with power—who gives it all its expansive force, and who makes it the messenger of his attributes to both nature and man. With his finger he has written the truth of this science on every object throughout the realms of nature. It is written in the beams of the mid-day sun—in the descending rains and gentle dews. It is written in the flowery field and shady grove. It is written in stars on the scroll of night. It is written in lightning on the bosom of the dark cloud. It is written deep in

sympathy on the soul, and controls the most powerful affections and stormy passions of the human heart.

Though the powers of mind and its complicated operations can be seen, felt, and in a good degree comprehended, yet, after all, we know but little of mind as it regards its *properties* or *substance*. Some suppose it to be absolutely and positively *immaterial*, because it is purely spirit. Others believe *mind* to be the result of organism, and contend that it cannot exist without a brain, which is the grand organ that secretes thought, even as the liver secretes its bile, or the stomach its gastric juice! The former of these suppositions is the one generally adopted by the Christian community who believe spirit to be an *immateriality*. The latter supposition is embraced by those Christians who wholly rely upon the resurrection of the body for the future existence of the spirit. They are called Materialists, because they make out the spirit to be no substance at all, but merely the result of organised matter. Of this faith was the celebrated Dr. Priestly. This latter position is also adopted by the Atheists, who contend that spirit cannot exist independent of an organized brain; and as they reject the Christian hope of the resurrection, so they contend that mind is extinguished in the night of the grave, and sleeps in nonentity, to wake no more. Hence the idea of a God, as an intelligent Spirit, they regard as a freak of fancy —a mere chimera of the human brain. Both of these positions as it regards mind, will here be rejected, and the reasons offered for doing so.

The *immateriality* of the mind is rejected, because

that which is positively and absolutely *immaterial* cannot of course possess either length, breadth, thickness, nor occupy any space. Indeed, it cannot, in this case, possess any form; and that which possesses no form cannot, in the nature of things, occupy any space. And to talk of a thing having an existence, which, at the same time, has no form, nor occupies space, is the most consummate nonsense. Hence an *immateriality* is a nonentity—a blank nothing. On the other hand, if *mind* is merely the result of organism, and if it cannot exist independent of an organized brain, then who made the first brain? Did it not require an intelligent spirit to organize its several parts, and adapt the eye to light, the ear to sound, and make these organs the inlets of sensation to the inhabitant in that brain? Surely the brain did not make itself, for this would only be saying, that the brain acted before it existed?

Having given the reasons for rejecting both these ideas of *mind*, we are now ready to introduce the question, What is MIND? It is a substance—an element—as really so as air or water, but differs materially from all inert substances in being. *Mind* is to be regarded as living and embodied form—as that incomprehensible element whose *nature* it is to possess *life* and *motion*, as much so as it is the nature of other substances to possess inertia. Hence, mind is, in these two respects—namely, *life* and *motion*—directly the opposite of dead matter.

In the first place we will start with the assertion that there must be in the universe an Infinite Mind. It is

impossible, in the very nature and constitution of things, that an absolute perfection of substances can be philosophically maintained without this admission. For the truth of this position, we rely upon motion. By MOTION, then, we are to prove the existence of an Eternal Mind.

In the first place let it be remarked, that inherent motion is not an attribute common to all substances in nature. This globe, as a body, is moved by the *positive* and *negative* forces of electrical action. And all the operations of nature in the earth and elements are carried on by the same power. Whether it be crystallizations, or petrifactions, the growth of vegetation, or its decomposition—motions and changes in air and water—or the crumbling particles of the mountain rock—all the motions, visible and invisible, that transpire in the mineral and vegetable kingdoms, and in all their multifarious operations, are produced by electricity, which is the universal agent appointed to keep up the order and harmony of the universe. And yet it is certain that electricity does not possess inherent motion as its attribute. Motion belongs to one substance only, and that is mind.

There is certainly as much order in the universe as there is in the human body. Let us, then, look truth calmly in the face. Each organ of the body performs but one function. The eye sees—the ear hears—the olfactories smell—the glands taste—the heart throbs to regulate the blood—the hands handle—the feet walk, and the liver secretes its bile. The eye never hears, and the ear never sees. So there is but ONE

SUBSTANCE in nature whose attribute is inherent motion, and that is MIND. Not one single part of the human body possesses independent motion. Electricity is there also the grand agent to move the limbs and vitals, and the living mind is the only moving power.

The point upon which we are now entering is one of most deep and thrilling interest. It is no less than to prove the existence of an Eternal Mind from *motion and the absolute perfection of the chain of elementary substances.* But while accomplishing this, it will be necessary to call to our aid the relative subtilties of different portions of matter with which we are surrounded. Let us for a moment turn our attention to a few of the most obvious substances in nature, and then glance at her absolute perfection as a whole. Let us carefully notice the gradation these substances occupy toward each other in their relation to motion, and then the intrinsic beauty of the subject will appear. We will begin at the heaviest matter that may first suggest itself to the mind, and leisurely pass on, rising higher and still higher, through its various grades, up to that which is more and more rarefied, subtile, and light, till we arrive at that which must necessarily possess inherent motion, and therefore living power.

The heaviest of gross substances in existence is the most difficult to move, and hence must be at the greatest possible distance from motion. Though there are several solid substances heavier than lead, yet, for the illustration of the subject, we may take this substance. Lead, then, on account of the density of its particles, is

difficult to move. Were it the heaviest substance in nature, it would take its position farther distant from motion than any other substance. Rock being more easily moved than lead, takes its relative position nearer to motion. In like manner earth is more easily moved than rock. Water is more easily moved than earth. Air is more easily moved than water. The gaseous fluids are more easily moved than air, and electricity is more easily moved than the gaseous fluids.

It will now be perceived, that as we mount the rounds of the ladder in the magnificent scale of material substances, there is a gradual approximation toward motion. Each substance as we rise, being more rarefied and light than the one below it, is of course nearer to motion than its grosser neighbour. And it will be perceived by every philosophic mind, that we cannot continually approximate motion without at last reaching motion, or that substance to which motion belongs.

We have now mounted from lead up to electricity; and though as we rose we found each successive substance more easily moved than the one below it, still we have not as yet found a single material that possesses inherent motion as its attribute. Lead, rock, earth, and water, are moved by impulse. Air is moved by rarefaction, and electricity is moved by the positive and negative forces. True, we have mounted up, as before remarked, to electricity, but even this cannot move, unless it is thrown out of balance in relation to quantity as to its *positive* and *negative* forces. In such cases it flies, equalizes itself, and again sinks to rest.

Electricity is a fluid most inconceivably subtile, rarefied, and fine. It is computed to take four million particles of our air to make a speck as large as the smallest visible grain of sand, and yet electricity is more than seven hundred thousand times finer than air! It is almost unparticled matter, and is not only invisible, but, so far as we can judge, it is imponderable. It cannot be seen—it cannot be weighed! A thousand empty Leyden jars, capable of containing a gallon each, may be placed upon the nicest scale, and most accurately weighed. Then let these be filled with electricity, and, so far as human sagacity can determine, they will weigh no more! Hence, to our perception, a thousand gallons weigh nothing.

As electricity, in regard to motion, stands upon the poise, being completely balanced by the positive and negative forces, that equalize each other, so it is easily perceived, that if we mount one step higher, we must come to that substance whose nature it is to move, and the result of that motion is thought and power. It is MIND. Hence it will be distinctly perceived, in view of the argument now offered, that we cannot, as philosophers, stop short of *motion* in the highest and most sublime substance in being. This conclusion, as the result of the argument, is absolutely and positively irresistible, and challenges refutation.

When we mount up in our contemplations through the various grades of matter, and see it continually brightening as we progress onward in our delightful career of rapture, till we arrive at that sublimated substance which can neither be seen nor weighed—

which moves with a velocity of twelve million miles per minute, and can travel around this globe in the eighth part of a second, we are struck with astonishment and awe! But as this is not the last link in the immeasurable chain, we are forced to proceed onward till we arrive at the finest, most sublime, and brilliant substance in being — a substance that possesses the attributes of inherent or self-motion and living power, and from which all other motion and power throughout the immeasurable universe are derived. This is the INFINITE MIND, and possesses embodied form. He is a living being. This Infinite Mind comes in contact with electricity, gives to it motion, arms it with power, and, through this mighty unseen agent, moves the universe, and carries on all the multifarious operations of nature, whether minute or grand. Hence there is not a motion that transpires amidst the immensity of his works, from rolling globes down to the falling leaf, but what originates in the ETERNAL MIND, and by Him is performed, through electricity as his agent. Mind is, therefore, the absolute perfection of all substances in being; and as it possesses self-motion as its grand attribute, so it is, in this respect, exactly the reverse of all other substances, which are, of themselves, motionless. MIND is above all, and absolutely disposes of and controls all. Hence mind and its agent, electricity, are both imponderable—are both invisible, and co-eternal.

As the Eternal One wraps clouds and darkness round about him, and holds back the face of his throne, so many do not believe in his existence, because he is

unseen, while all the visible objects of creation are to them so many realities. But the very position here assumed is an erroneous one. The very reverse of this is true. What is seen is not the reality, but is only the manifestation of the *unseen*, which is the reality. Let us carefully look at this point. There is an apple-tree; it is plainly seen; but is that tree the reality? No; but it is the result of an *invisible* cause, and that *unseen* cause is the reality. But what was it? It was not even the seed, but the *life* of that seed was the reality; and that *unseen life* possessed the embodied form of that tree. All its shapes and colours were there. By coming in contact with the soil and moisture, in a proper temperature of climate, it was enabled to throw out its own invisible and living form. First, then, the life; next the seed in which it dwells; next the trunk of the tree appears. Then its limbs and branches—its buds, leaves, blossoms, and fruit again end in living beauty. It began in life, and in seed or life it ended. It performed an electric circle. The tree, then, is nothing more than a visible outshoot—an ultimate of an invisible substance, which is the reality.

All the powers and operations of nature are lodged in the unseen and finest portions of matter—they pass on through every grade, and end in the gross and heaviest parts. The unseen power that stirs the earthquake and convulses the globe is the *reality*. It passes through every grade of matter, and ends in rending the solid rocks and hurling cities in the vortex of ruin. The power that moves this globe in its orbit at the rate of sixty-eight thousand miles per hour, is an invisible

agent, moved by omnipotent Power—for all operations and effects begin in the finest substance in being, which is the unseen cause, and therefore the reality. Hence it is the same in nature as in the human system, as has already been shown in the arguments adduced on the philosophy of disease. The disease begins in the finest substance of the body—in the electricity of the nerves —passes on to the blood and flesh, and ends in the bones. There is, indeed, but one common mode of operation in nature and in man.

It is now proposed to consider an important point in relation to mind, which has been entirely overlooked by philosophers, viz.: its *involuntary* powers. To speak of the *involuntary* powers of mind will certainly produce a singular impression upon some; and the strangeness of the idea may, perhaps, fill others with surprise. But, strange as it may appear, it is nevertheless true that mind possesses the two grand attributes of *voluntary* and *involuntary* power. These two constitute the mind as a living being of embodied form. If mind make use of electricity as its agent, then it must possess the voluntary and involuntary powers to meet the positive and negative forces in electricity. If this be not so, then the Infinite Mind cannot be the Creator and Governor of the universe; because it is by his *voluntary* power that he creates a universe, but it is by his *involuntary* power that he sustains and governs it. Each of these powers, from a philosophical necessity, and from the very nature of his being, perform their own peculiar functions, and in perfect harmony preside over their own respective departments.

It is the peculiar province of the voluntary power of the Infinite Mind to plan, arrange, dispose, and create worlds and their inhabitants, and it is the peculiar province of his involuntary power to govern and control these worlds and their inhabitants through the fixed laws of nature. Let us reason this point, and its consistency will appear.

In the first place—if the voluntary power of the Creator governed the universe, then no possible contingencies could happen—and nothing once commenced could ever perish prematurely. For instance: if God determined to create a human pair, and by his voluntary power commenced the work, they could not perish when his work was but partially accomplished. They are destined to come to maturity, invested with the true lineaments of form—and destined to gaze upon each other as perfect specimens of living beauty. If not, then God in his voluntary and absolute determinations can be thwarted and disappointed.

The first male and female, at least, of each species, were produced, and the whole living chain of animated existence was placed upon this globe by the voluntary powers of God, without any previous parents from whom they received their being. They were not born, but created, for there is philosophically and strictly a very wide difference between being *created* and *born*. The *former* we call miracle, the *latter*, an order of nature. To produce a human pair without a previous father and mother, is not in the order or power of nature, for she never changes her mode of operation in the production of her animated existences.

The same is true in relation to the vegetable kingdom. The whole species of vegetable life was produced by the voluntary powers of God. In the order of nature there never was an acorn but what grew on an oak; and there never was an oak but what came from an acorn. Geology proves that there has been a period when there were no vegetables or animals on this globe. Which then was first—the acorn or the oak? If you reply that the acorn was first, then there was an acorn that did not grow on an oak. If you say that the oak was first, then there was an oak that did not come from an acorn. Whence then is the starting point of creation, if there is no God? for nature cannot start herself, as this would only be saying that she acted before she existed. Whether the Creator, in the first place, produced by his voluntary powers the seeds or the plants, is of no consequence to the present purpose. It is enough to say, that they were brought into existence without any parent stock, and in performing this work there could be no uncertainty, nor could any thing perish prematurely, because it was under the voluntary powers of the Infinite Mind.

But after this globe was created, and the first link of every species of vegetable and animal life was moved into existence by the voluntary powers of the Creator, it then naturally and of philosophical necessity passed from the control of the *voluntary* powers to the control of the *involuntary* powers of the Infinite Mind, and by them to be governed through the established laws of nature. Here then casualties may naturally arise,

but nowhere else under the government of the Supreme.

This view of mind removes the many difficulties and perplexities we encounter, when we contemplate the unchangeable character of the Creator in the government of the world. Millions of our race are continually perishing by premature birth! The eye was most skilfully organized and adapted to see light, but saw it not. The ear was formed—all its vocal chambers were arranged, and the whole adapted to the reverberations of sound, but it never heard. It had hands, but they never handled—feet, but they never walked—lungs, but they never breathed—and a mouth, but it never spoke, nor tasted food.

Again—how many millions of our race die under ten years of age! And though they were constituted, and ripening for the enjoyment of the social and domestic affections, and the multiplication of their race, yet they were prematurely cut off, and left no progeny on earth. Now if these events are under the government of the voluntary powers of the Creator, would he not, it may be asked, be arrested in the execution of his voluntary will, and would not his designs fail of being accomplished? The conclusion is absolutely irresistible, for how can we judge of *designs* only as we see the adaptation of means to ends? If an eye and ear are formed, and adapted to light and sound, does not this prove the will and design of God, that the one shall see, and the other shall hear? It does. If then the infant prematurely dies and never sees an object, nor hears a sound, are not those two organs formed in vain, and

are not the design and will of the Creator both frustrated? If the girl that died at ten years of age, and never bore nor nursed children—if it is admitted that she did not answer the full measure and end of her existence, in common with her sex, is not then the will of God rendered abortive, and do not his designs in this case fail? It must be so, if the government of the world is under the voluntary powers of the Infinite Mind.

That this part of the subject may be understood, and its consistency clearly seen, it will be necessary to present it in a very plain and simple form. Let us take for illustration the human mind in connection with this body. We have two distinct brains—the cerebrum, with its two hemispheres and six lobes, commencing at the frontal part of the skull and occupying the greater portion of the cavity; and the cerebellum, which occupies the back portion of the skull. The spinal cord, extending through the vertebræ to the bottom of the trunk, is but the continuation of these two brains. From the spinal cord branch out, as before stated, thirty-two pairs of nerves, embracing both the nerves of motion and those of sensation. From these again branch out others, and in thousands of ramifications carry out the full power of both brains into every part of the system.

The cerebrum is the great fountain of the voluntary nerves, through which the voluntary powers of the mind ever act. The cerebellum is the fountain of the involuntary nerves, through which the involuntary powers of the mind ever act. Though the voluntary and in-

voluntary nerves from these two brains seem to blend in the spinal cord, yet they preserve their distinct character, even to their final termination in the system, and execute the functions appertaining to their own office in producing voluntary and involuntary motion. Such is the residence of the living mind, which seems to hold its throne in the medulla oblongata, at the fountain-head of the voluntary and involuntary nerves. From thence the mind, by its volitions, controls all the voluntary motions of the body, through the cerebrum. At will it moves the hands in any possible direction to handle substances, and at will it moves the feet to walk.

But over the throbbings of the heart, the ultimate heaving of the lungs, the circulation of the blood, and the digestion of food by the stomach, there is no voluntary control. Awake, asleep, at home, abroad, the heart continues its motions, and the functions of life are executed, whether we will it or not. These then receive their motions from the involuntary powers of the mind, acting through the cerebellum. That these are all moved by mind is certain—because, take the mind or spirit from the body, and all motions, whether voluntary or involuntary, instantly cease.

Let us now make an application of this to the Infinite Mind, in creating and governing the universe. If, for instance, any one make machinery of various kinds, these are his own creations, for they are made by the voluntary powers of his mind. If he cultivate the earth, and raise grain and the various vegetables, to sustain his existence, these again are his own

creations, for they are produced by his voluntary powers. He prepares them, by various processes, for his use—he cooks and places them on the table. He eats them, and thus far they are under his voluntary action. But the moment they are eaten, his creations are finished, and the whole, naturally and of philosophical necessity, passes beyond his direct volition, and is subjected to the involuntary powers of his mind. These now take charge of this new creation, and govern it in all its involuntary motions and revolutions, according to the fixed laws of the organized system.

In like manner the voluntary powers of Deity are unchangeably employed in planning, arranging, and creating new worlds, and systems of worlds, and peopling them with inhabitants. When the whole of any such system is finished, and all its laws established for the rolling of worlds, and for the operations of the mineral, vegetable, and animal kingdoms, the whole naturally passes, according to the principles of philosophical necessity, from the action and control of his voluntary miraculous power, and submits itself to be governed through the fixed laws of the universe, by the involuntary powers of the same Infinite Mind. As the bare presence of the human mind in the brain causes the heart to throb and the functions of life to proceed, even when that mind is wrapped in sleep so profound, that not a thought is stirring in its voluntary department, so the bare presence and majesty of the Infinite Mind, even if he should not exercise a thought, would cause all worlds to roll through immensity, and

cause all the operations of nature in the mineral, vegetable, and animal kingdoms to proceed on in their ceaseless changes; for these are under the control of the involuntary powers of the Deity, acting through the laws of the universe.

CHAPTER VI.

In the preceding chapter the question presented for consideration was—Where is the starting point of all motion and power, whether voluntary or involuntary, in both nature and man? The transcendent importance of this question clothes it with the eloquence of its own splendour. It was answered, by showing that all motion and power originate in mind. And surely the idea that mind possesses the attribute of innate motion and living power, is both majestic and sublime. It was also shown that mind has two grand forces. Its voluntary and its involuntary powers, by which the world was created and is governed. The existence of the Infinite Mind was proved from *motion and the absolute perfection of material existences*. It was shown that mind must be some substance, and not the result of organism, nor an absolute *immateriality*, which is but a *nonentity*.

It is true that thought, reason, and understanding are considered to be mind, and that these are *immaterial*. Thought and reason are but the results of mind. What is it that thinks and reasons? It is the mind. Then mind is something distinct from these mental

operations, which are only its effects. When the voluntary powers of the mind are stilled in sleep, reason and thought are gone. Hence if these are mind, then the mind is annihilated in sleep. But if we admit mind to be a substance, a living and spiritual organized being, then all is plain. Sleep stops its motion, and thought is gone. Remove that pressure, and release the mind, and instantly it resumes its inherent motion, and the result of that motion is thought and power.

Let us now turn our attention to the subject of creation for a moment. Like a drop to an ocean, or an atom to a universe, any possible representation of the intrinsic grandeur of this subject must fall so far short of its reality, as to render any attempt at an adequate description the unpardonable presumption of impotent folly. Yet, as we are endowed with reason, and as the inspiration of the Almighty hath given us understanding, so we are bound, by the very laws of our being, to extend our researches to the utmost verge of our mental capacity. He who would curb the human intellect and say *this* or *that* is a subject with which we have no right to meddle, and into which we have no right to inquire, is not only recreant to duty as an intellectual and moral being, but betrays his own ignorance, and proves himself a scientific bigot. Give the mind full scope and sea-room—let it feel the deep stirrings of its own powers, and soar, if it can, into the light of eternity, and survey the very throne of God, and Him who sitteth thereon; and, if possible, let it scan the secret energies of his creating fiat, and even

examine the raw material out of which worlds were manufactured.

It is the most commonly received opinion in the Christian world, that God made all things out of nothing. It is true the inspired book does not say, or even hint this. It simply says—"In the beginning God created the heavens and the earth;" but it does not add the words—*out of nothing.* It is absolutely and philosophically impossible, in the very nature and constitution of things, that something can be made out of nothing. It implies, at the same time, a contradiction in terms. We cannot form even a notion in our imaginations how much of nothing it would take to make the least imaginable something. We are speaking of *nothing* in the strictest sense of the word. But using the word *nothing* in its common acceptation, we can easily perceive how all things could have been made out of nothing. When all visible objects are removed from a room, we say *there is nothing in it—it is empty.* Yet we know that it is filled with air, because we continue to breathe. But if the air, by a force-pump, were removed from an air-tight room, we might, with much more propriety, say *there is nothing in it;* yet electricity would be there. If solid substances were therefore made out of air, in an empty room, we could say that they were made out of nothing, for the room, according to the usual mode of expression, had nothing in it. But admitting the air to have been extracted from the room, and nothing but electricity left, and if solid substances were produced from this ethereal and invisible fluid, we could with much more

apparent consistency say, that they were made out of nothing. In this sense, it may be granted that all things were made out of nothing. Paul says—"The things that are seen were not made of things that do appear." Here he plainly states, that the substances *seen* were made of *invisible* substances, or such as did *not appear*—for by *things* he only means *substances*.

If, however, it be said, to *create* must mean to bring into existence something from nothing, it is only to be said, that this is not so; for it says, "God created man out of the *dust* of the earth." Here he created him out of something—it was out of dust, and yet it was creation. The Hebrew word rendered *create*, more strictly means to gather together by concretion, or to form by consolidation—but never can it mean to bring *something* into existence from absolutely and positively *nothing*. It is therefore contended that all things were made out of electricity, which is not only an invisible and imponderable substance, but is primeval and eternal matter. It contains the invisible and imponderable properties of all things in being. That this is electricity is certain, because there is no other substance with which the Infinite Mind could have come in direct contact, so as to have produced by his creating power the solid and visible substances that compose the globe. It is, as has already been proved, in a preceding part of this work, philosophically impossible for mind to come in direct contact with any substance in nature except electricity. Hence electricity contains the elementary principles of all things in being, and contains them in their original, invisible, and imponderable state.

There must be something eternal. God, duration, and space, exist of philosophical necessity, and that space was eternally filled with primeval matter. When it is said that they exist of necessity, it is meant that the contrary of space and duration cannot possibly be conceived. If infinite space were filled with an infinite globe, it would be space filled. If that globe were struck out of existence, it would be space empty. Filled or empty, it would still be *space*. As space exists of necessity, it is absolutely and positively eternal, and hence could never have been created nor changed. The same is true in relation to duration. Duration must have rolled on, even if there had been no revolutions of suns and worlds to mark its periods. The contrary cannot possibly be conceived. Hence duration and space both exist of philosophical necessity, and are absolutely eternal. Endless duration is the age of Jehovah, and space is the empire in which he dwells and reigns. This space was eternally filled with mind and invisible matter in its original state. They both exist of philosophical necessity.

Hence matter is eternal, because if there ever had been a period when there was nothing in existence as it regards matter, then nothing would now have been, for nothing cannot create itself into something. The same is true in relation to mind. If there ever had been a period when there was no mind in existence, then no mind could now have been, for mind could not have created itself, as this would be admitting mind to have acted before it existed. Hence mind and primeval matter are both coexistent and coeternal. Indeed, the

one could not exist without the other, because that electricity, which is original and eternal matter, is the body of God. All other bodies are therefore emanations from his body, and all other spirits are emanations from his spirit. Hence all things are of God. He has poured himself throughout all his works. He has poured spirit from spirit's awful fountain, and kindled into existence a world of rationals. On this principle it will be seen, that the Eternal Mind is not absolutely omnipresent, while his electrical body is, because it pervades immensity of space. Mind must be enthroned, and not diffused over the whole body. And as the mind of Jehovah actuates his body, so he produces impressions throughout the boundlessness of space, and makes himself instantly felt throughout the immensity of his works, even as the human mind, which is located in the brain, still makes its presence felt throughout the body, even to every possible extremity, and produces the impressions of its existence on others.

Mind or spirit is of itself embodied and living form. It is spiritual organism in absolute perfection, and from mind itself all form and beauty emanate. The body of man is but an outshoot or manifestation of his mind. If the expression may be indulged, it is the ultimate of his mind. Hence every creature in existence has a body which is the shape of its mind, admitting that the physical laws of the system were not interrupted in producing the natural form of the body from mind.

We touch the finger to any substance, and in the finger we appear to feel it. But this is not so, because all feeling is in the mind. If we amputate the arm or

leg, yet the fingers and toes as usual can be felt. For instance, we move a finger or wield the arm. How is this done? This question is answered by saying, that the mind has its spiritual fingers, arms, limbs, and all its lineaments of form corresponding to those of the body. The mind holds its throne in the brain, and possessing in itself the power of feeling and motion, it merely stirs its spiritual fingers, or wields its spiritual arm, and through the electric action of the nerves, which are laid, like so many telegraphic wires, between the two, the natural finger and the natural arm are compelled to make an exactly correspondent motion. This solves the mystery why the man who has his arm amputated, even up to the shoulder, yet feels his arm and his fingers as long as he lives, and often feels in them an itching sensation, or even pain, and that, too, at the same distance from his body which the fingers and arm occupied before amputation took place. All operations, convulsions, and motions begin in the unseen substance of the body, and end in its gross and solid parts. These are last moved, and last affected. This is not only so in muscular motion, but throughout nature.

Having the great principles of mind and matter before us, we may proceed to notice the creation of worlds. It has already been remarked, that all the chemical properties of all substances in existence, belonging to our globe and its surrounding elements, were made out of electricity. Hence electricity contains all the elementary principles of all things in being. The ancients supposed there to be but four elements—namely, *earth*, *air*, *fire*, and *water*. It so happens,

however, that *heat* is no element at all, any more than *cold*. It is merely an effect of substances in motion, produced by their friction. Though the ancients supposed there to be but four elements, yet as the science of chemistry advances onward toward perfection, more elements are detected. More than fifty have been already discovered, yet we have no reason to believe that even these are all. Suppose, however, that there are one hundred elements belonging to this globe. Then there are one hundred elements in electricity, out of which this globe was created. We will step back in our imaginations to that period when this globe, as such, had no existence. For the sake of perspicuity, we will suppose one hundred cords to be fastened on those one hundred elements in electricity.

Now, as the Eternal Mind can come in direct contact with electricity only, so he exerted his voluntary powers that constitute his creative energy, and condensed those one hundred elements that constitute electricity, down to a more gross and dense state, each element sliding down its own cord in its progress toward creation. Though mind can directly touch nothing but electricity, yet electricity, as the universal agent, under Deity, can touch all substances in being. The Creator again acts, through another volume of electricity, upon those one hundred partially condensed elements, and moves them down a grade farther onward toward their ultimate or created state. And thus the work progresses; wave successively following wave down its own cord, till they all become air. Hence air contains the one hundred elements; and all the chemical pro-

perties of all things in being are involved in it. And so the work of creation progresses, under the never-ceasing action of the Infinite Mind, from whom all motion and power emanate, till those one hundred elements are made into water. Hence water contains all the chemical properties of all things in being. Matter, from its invisible electric state, has now become visible in the crystal, volatile, and colourless state called water. The whole one hundred elements are here in solution; and from water, which is the universal solvent of nature, earth and all mineral and crystallized substances were made. Boyle has proved, that by transmutation, as he terms it, nature turns water into earth; and Bishop Watson, in his "Chemical Essays," admits the same, and says, "it has never been disproved by any writer." Boyle should not have said that *nature*, by transmutation, does this; but that the CREATOR, by his own power of inherent motion, turns water into earth. But to resume this interesting subject.

The one hundred elements, having reached the lower extremity of the one hundred cords, have now attained their ultimate created condition and form, and the finished globe, in all its youth, beauty, and variety, appears. At the top of those cords are the one hundred elements in their original electrical state, resting in their own invisibility; and as we descend we see the continual change each successive wave passed through, as the whole one hundred substances were, under the action of the Creator, gradually approaching their created state, till at length they emerged from invisibility

and chaotic night into the light of day, and rendered the variegated beauties of their created forms visible to the eye of the beholder.

The globe being finished, it required electricity, the original substance out of which it was made, to be brought upon it by the Creator, so that his infinite mind, through this agent, might come in contact with it, in order to move and govern it, not only in its revolutions by the attractive and repulsive forces, but in producing all the changes and operations in its mineral, vegetable, and animal kingdoms. As this great work is submitted to the involuntary powers of the Infinite Mind, and as mind cannot come in direct contact with gross matter, so the beauty and simplicity of the subject appear in the grandeur of the idea, that electricity, being uncreated and eternal matter, is the only substance that mind can touch, and hence is the great physical agent the Creator employs in the government of all worlds. The unchanging laws of the universe are but the unchanging thoughts of God. It must, however, be borne in mind, that it requires electricity, the very substance out of which the globe was made, to govern it by its positive and negative forces under the energy of Infinite Power.

As this subject is somewhat intricate, it becomes necessary to be more explicit, in order to a proper understanding of it. When it is said that it requires electricity to govern the globe, it is meant that electricity, being the uncreated substance, is the *positive* force, and the globe, being the created substance, is the *negative* force. In the next place, it will be clearly perceived,

that all the substances existing in the globe as so many ULTIMATES, exist in electricity as so many PRIMATES. For instance: If there is gold in the globe, then there is gold in electricity, out of which it was made. If there is phosphate of lime in the globe, out of which the shells of the ocean and bones are formed, then there is phosphate of lime in electricity, out of which it was made. The gold in electricity is in a gaseous and invisible state, and is the *positive* force, and the gold in the globe is in a solid and visible state, and is the *negative* force. As the positive and negative forces always come together, so the gold in electricity entirely controls and mineralizes the gold in the globe, but lets its ninety-nine kindred elements alone. Each one keeps its own cord of communication from top to bottom—from *primate* to *ultimate*—from *positive* to *negative*. The same is true, not only of the gold, and of the phosphate of lime, but also of the ninety-eight remaining elements. The whole one hundred elements in electricity, as the *positive* forces, are brought to act upon the one hundred corresponding elements of the globe, as the *negative* forces, and thus not only move it on its axis, and in its revolutions around the sun, but produce all the changes and operations in these elementary substances of which the globe is composed.

These ideas of the creation and government of the world are in reality sublime. And when we reflect that the Infinite Mind comes in contact with electricity, and through that eternal, invisible agent, governs all worlds by his involuntary powers, sublimity rises

into infinite magnificence, and overwhelms the soul with awe!

The sun, being pure electricity, is, of course, a cold, invisible body. He is placed, as is supposed, in the centre of a retinue of worlds composing our planetary system, and that to these worlds he gives light, heat, and vegetation. But, in this view of the subject, it is evident that there can be no light above our atmosphere which surrounds the globe to the height of about 50 miles. As electricity travels from the sun to the globe in never-ceasing streams, so when it strikes the top of our atmosphere it becomes faintly visible, and not before. This is proved by the morning and evening twilight, when the sun is so far below the eastern hills as to strike the very top of our atmosphere, apparently on a level with our fields, and affords a feeble light on account of the thinness of our air at that height. But as it rises higher, its rays shoot deeper, and the air growing denser as they approach the earth where we stand, till they touch it, the friction on the particles of air is of course greater, and the light and heat are rendered more intense by this density of atmosphere, and by their final reflection and reaction from the globe. Hence, could we rise to the top of our atmosphere, the sun would disappear, and we should there be shrouded in total darkness. Electricity is cold and invisible, and as it travels from the sun to the globe at the rate of twelve million miles per minute, so it sets the particles of the air on fire by the rapidity of its motion and friction. Such is the philosophy of the morning and evening twilight, which never has been,

and cannot be explained on any other principle than the electrical invisibility of our sun, and the absence of all light above our atmosphere. And electricity, thrown from the sun to the globe, is the mode employed by the Creator to bring it to its full growth and perfection, as a meet habitation for man.

As electricity is, in its one hundred elements, continually pouring from the sun upon the globe, why does it not continue to increase it in bulk? It does, and hence its entire creation, as to its size, vegetables, and animals, is not yet perfected, but will be in future ages. Its distance from the sun, and its exact relation to surrounding worlds, will then forbid its increase in bulk. The human body, when completely developed by food and drink, ceases its growth, even though the same sustenance, both in quality and quantity, is continued. This we will more fully explain, and hence the cause of the variation of the compass, which in philosophy yet remains inscrutable, will be made to appear.

Comets are declared by Newton and others to be melted globes, and he computed the heat of one to be several thousand times hotter than that of red-hot iron, and that it would take a comet, the size of this globe, fifty thousand years to cool to its centre. Comets move in very elliptical orbits, and are deemed, on this account, to be very eccentric bodies. The cause of this is, that while they are chained by the attractive and repulsive forces to keep a circle, yet as they are propelled in a straight line, sky-rocket-like, by their own internal gaseous flames that stream in their course, so their orbits are elliptical. As they cool, their own internal

force is lessened, and their orbits become more circular, because there is less trespassing on the attractive and repulsive forces, which, if left to their own operation, independent of foreign influences, would move all worlds in perfect circles. Immensity of space is not square, for then worlds would move in a square, but it is round, if we may be indulged in the expression in regard to that boundless field, "whose centre is everywhere, and its circumference nowhere." Electricity, uninfluenced, always moves in circles.

The globe yet moves in an elliptical orbit, because its bowels are melted lava, and perhaps not more than one hundred miles in depth of its crust are as yet cooled. And the two hundred volcanoes now in existence are so many spiracles to the subterranean furnace, and continually throw off the gaseous substances generated in its bosom, and cause it to transgress in some measure the attractive and repulsive forces that move it. As it cools, it continually approximates, in its orbit, nearer to a circle. This will cause the variation of the compass to continue, till its own internal forces cease to affect its motion, and allow the law of attraction and repulsion to move it in a perfect circle around the sun. And when it shall perform an exact circle in its annual revolution, it will be perfectly finished as to its size, and yet the quantity of electricity thrown upon it from the sun will be the same as it now is, and ever has been. But, this redundancy will be thrown off at its north and south poles, and in such increased quantities as to warm and enlighten those extremities of the globe, and bring them into the fruitfulness and bloom of the

garden of Eden. Then the variation of the compass will cease, inasmuch as the cause will be removed that produces it. The cause of its variation is the elliptical orbit in which our globe moves, and its continual and unceasing approach to a circle. And when that circle shall be obtained, the globe will be finished, and the variation of the compass will disappear.

The globe is yet in its infancy—yes, in the embryo of its being—and it will require many thousand years to finish it. And this must be done, because, under the voluntary powers of the Creator, nothing can perish prematurely. Many species of vegetables and animals now in existence will become extinct, and disappear from the page of the naturalist, and others of a more improved and superior character will be awakened into being. They will be perfectly adapted to the future and ultimate perfection that this globe, under the energies of the Infinite Mind, is destined to attain. Its creation will then be perfected. The soil upon which we *now* stand, will *then* be some deep stratum in its crust, containing our present vegetables and animals in a state of petrifaction. These will be pronounced by coming generations the strange nondescript remains of past centuries, and afford to the future geologist and naturalist abundant materials for their loftiest speculalations.

CHAPTER VII.

The query may perhaps now arise in the mind of the reader, What bearing has the subject of the creation of this globe, and the original materials out of which it was made, advanced in the last chapter, upon the science of Electrical-Psychology? The answer to this query will be fully made to appear in the present chapter. It has already been stated, that man is an epitome of the universe, and that the chemical properties of all the various substances in existence are congregated in him, and form and constitute the very elements of his being. It has also been stated, that in the composition of this body are involved all the mineral and vegetable substances of this globe, even from the grossest and heaviest matter up to the most rarified and light. And *lastly*, to finish this master-piece of creation, it was stated that the brain was invested with a living spirit, that, like an enthroned deity, presides over, and governs, through electricity as its agent, all the voluntary motions of this little, organized, corporeal universe; while its living presence, and involuntary self-moving powers, cause all the involuntary functions of life to proceed in their destined course. Hence

human beings, and all animated existences, are subject to the same common electrical law that pervades the universe, and moves all worlds under the superintendence of the involuntary powers of the Infinite Spirit.

That all substances are incorporated in the body of man, is irresistibly true, otherwise he could not inure himself to all, even to the most deadly poisons, and render them, in a good degree, harmless in his system. He may so accustom himself to the use of tobacco, rum, or even opium, that he can take into the stomach a quantity sufficient to produce the death of several individuals, while he himself will experience from it but a slight effect. He may even commence the use of arsenic in small quantities, gradually increasing the dose, till he gets incorporated into his system a sufficient quantity to kill, for instance, five men. As in this case it forms a part of his body, so it causes a longing for it in proportion to the quantity in the system. Should he now take a portion sufficient to kill five men, it would only produce a balance of power with that already in his system. It would meet the demand. This is habitude. But should he take one portion more, sufficient to kill any other man, he would die. Now it would be impossible for a man to inure himself to any such substances, unless there were some small particle in the composition of his body on which to build. Hence it is philosophically true, that man is an epitome of the universe, and that all the elements, in exact proportions, are most skilfully combined in his system by the hand of the Creator; and these propor-

tions should never be disturbed and thrown out of balance by dissipation.

Having these facts distinctly before us, it is only necessary now to state, that if there are one hundred elements in the globe, which was made out of the same number in electricity, then there are one hundred in the composition of man's body, for he is but an epitome of the universe. As his body was created out of the dust of the earth, and is but a vegetable of the second growth, so it is the same as though it had been originally made out of electricity. And as the globe, after its creation, required electricity, the original substance from whence, under Deity, it sprung, to move, control, and govern it, so, after man was organized, and his brain invested with a living spirit, it required electricity, the primeval substance out of which he was made, to be inhaled with the air into his lungs, and carried to every part of his system, and by which, under the impulse of mind, it must be moved, controlled, and governed by the positive and negative forces that move all worlds. It will now be perceived what connection Electrical-Psychology has with the creation of our globe. It is a science that involves the electrical theory of the universe, and all the multifarious operations of nature.

We know not, as yet, how many elements there may be in existence. Let it, however, be distinctly borne in mind, that if there are one hundred in electricity, which is primal and eternal matter, then there are one hundred in the globe, one hundred in the vegetables that the globe produces, and one hundred in the human

body, which is sustained by, and, therefore, made up of vegetables. The stomach is the great workshop of the system, to manufacture new materials to supply the demand occasioned by its constant wastes. The food and water taken into the stomach contain the one hundred elements to meet the supply of the one hundred that are contained in the composition of the body. Electricity, containing also one hundred, is inspired by the lungs, communicated to the blood, from the blood to the nerves, and conducted to the brain, and there laid up for the use of the mind, as explained in a former chapter. This electricity is sent by the involuntary powers of the mind, from the cerebellum through the pneumagastric and other involuntary nerves to the stomach, to produce digestion. The one hundred elements in electricity meet the one hundred corresponding elements in the food, and convert the whole mass into one homogeneous chyle. This is done by the positive and negative forces, without the least confusion or interference of one element with its kindred elements. The nutritious parts of this chyle are taken up by the absorbents, and, in the form of serum, are thrown into the circulating system, and transmuted into blood. The blood is the universal solvent of the system, containing, in solution, all the chemical properties that are to constitute the body, even from its finest particles down to the solid bones—the same as water is the universal solvent of nature, out of which all the constituent principles of this globe are formed, through electrical action.

The finest particles of the blood are taken up, and,

by the positive and negative forces of electricity, are transmuted into flesh, tendons, bones, and all the substances that constitute the animal economy, and by the same forces the old particles of the body are thrown off, to mingle again with those of the globe. In order to express clearly this idea, let us take one of these elements, and carry it through in all its principal bearings.

Phosphate of lime is the substance that forms our bones. It may not be a simple element, but in order to convey the idea, it may be so considered. As our bones are continually wasting away, so this waste must be supplied; and as they are often fractured, so they require new particles to reunite them by ossification. Hence there must be phosphate of lime in our food as well as in electricity. This is certain, because that hard, bony-like substance, collected on the teeth in the act of mastication, is from the phosphate of lime in our food and water. Having stated these facts we can now turn to the point under consideration.

The food is taken into the stomach. The phosphate of lime in electricity being the *positive* force, moves from the brain—from the cerebellum—through the involuntary nerves to the stomach. It takes hold of the phosphate of lime in the food, which is the *negative* force, and leaves the other ninety-nine elements of the food unmolested. This is perfectly philosophical, for the *positive* and *negative* invariably rush together. It converts this phosphate of lime into chyle, and takes it up through the absorbents, and transmutes it into serum and blood. This phosphate of lime from the

food now forms a constituent part of the blood. In the next place, the phosphate of lime in electricity takes hold of the phosphate of lime in the blood, and moves it on through all its destined avenues till it reaches the liver, which, while it secretes the bile, seems to act as the bolter of the system, to separate these one hundred elements to be distributed to their destined, correspondent parts of the body. The phosphate of lime in electricity extracts the like substance from the blood at the liver, conveys it to the various bones of the body, transmutes it into an osseous substance, and lays it down, particle after particle, and thus forms anew the solid framework of the system, while the dregs are passed off through the urinary secretions. But before it lays down the *new*, it removes the *old particle* by its repulsive force, and compels it to fly off by insensible perspiration. The operation of this one element being understood, there can be no difficulty in comprehending the operations of the other ninety-and-nine, in carrying on the work of digestion to keep up the repairs of the body.

These ideas, though somewhat intricate, are nevertheless interesting and sublime, as they unfold the relation in which man stands to the globe, to surrounding worlds, and his Creator, as an epitome of the universe. If their novelty produce surprise in any breast, yet this is no reason that they should awaken resentment, or kindle indignation against him that utters them. We are finite beings, can know but little, and we should ever be ready and willing to freely express our thoughts reciprocally to each other, independent

of the opposition of men. By this mutual interchange of sentiment and feeling, we should increase in knowledge, and grow wiser and better. Indeed, we need not go, in our contemplations, out of ourselves to learn the great principles and operations of both mind and matter, of God and his works. As it regards human research, the words of the poet are unchangeably true, and must stand unshaken when thrones and kingdoms fall. He immortalized his verse when he breathed out,

"The proper study of mankind is MAN."

Let us now turn to another department of the subject, equally interesting, viz. the DOCTRINE OF IMPRESSIONS, by which both nature and man are thrown out of balance, made sick and cured. In this also we shall see the relation between man and nature.

The philosophy of disease having briefly been considered, there is no occasion again to range that field of pestilence and death. The observations about to be made will be principally confined to nature, and even these will be brief. The law of EQUILIBRIUM is the grand central LAW of the universe. It holds over nature the reins of government, and allows her in her operations and changes, to stray, but not too far, from the central track. She may rise above, or fall below this law, but to its mandate she must ever bow, and at stated periods resume her medium course.

Electricity, being a universal agent, produces all the phenomena and changes that transpire in our globe and its surrounding elements. By heat, which is an electrical effect, the air is rarefied and water is evapo-

rated. When the rarefaction of the air is carried to an extreme, then that portion of the earth and its inhabitants suffer. Nature is diseased, and the denser portion of the atmosphere is, at length, aroused from its slumberings and armed with force. The sweeping hurricane rushes, or the dreadful tornado roars in its awful movement to fill up, and rescue that rarefied and diseased portion of the air, and continues its force till an equilibrium is attained in her aerial realms. At this point all action ceases, and nature is well. She was cured by her own impressions.

In like manner, evaporation may continue till the air is filled, in its upper regions, with vapours. As electricity has a strong affinity for moisture, it leaves the drier portions of the atmosphere near the earth, and ascends to the moist and vapoury regions above. By this process electricity is thrown out of balance. The man who has had a broken bone, even years ago, or who is subject to rheumatism, will feel an inconvenience in that spot, or in his system, as harbingers of the approaching storm. The cause of this is, that he does not inspire as much electricity as usual with the air into the lungs, and feels the inconvenience. And the storm will surely burst, if there are no upper currents of air to disperse the vapour. The electricity being thrown out of balance condenses the vapours into thick clouds by its coldness, and thus darkens the heavens. The lightnings flash, the thunders roll, the rains descend, and the war of elements will continue till that subtile fluid is equally dispersed throughout the atmosphere. Nature having gained her equili-

brium in her aerial realms is at rest. By these awful impressions of her voice she is cured. Here it is distinctly perceived that electricity is a cold body, because it condenses the storm, and when its quantity is sufficiently great it produces hail, even in the warmest weather in our southern climates. In these few ideas we see also the philosophy of storms.

Even the globe may be sick. She may have a bowel complaint. By the confined air and continually generating gases in the lava contained in her bowels she is thrown out of balance. The earthquake awakes from slumber, and springs from its dreadful couch. It starts to discharge its force at the nearest volcano. In its fearful march it sounds its rumbling thunders and convulses the globe. Flames start up through fissures of the opening earth, and from the bottom of the ocean burning islands arise! Volcanoes bellow and disembogue. Their lava overwhelms devoted cities, and their shock hurls others in crumbling ruins! A reaction takes place, an equilibrium is produced in her subterranean realms, and she is well. By these awful impressions of her own power she is cured.

These observations might be extended to every visible department of nature, and her more minute operations might be noticed, but these few remarks in reference to her most stupendous and obvious convulsions, are sufficient to give an idea how she becomes diseased by being thrown out of her equilibrium, and how she is cured by the inherent force of her own impressions. As man, then, is an epitome of the universe, the full force of the arguments on the philosophy of

disease and the rationale of its cure heretofore advanced, will be clearly seen, and the relation in which man stands to the universe will be distinctly understood.

It may here be remarked, that we should endeavour, at all times, to keep ourselves *positive* to the surrounding impressions of nature. We take disease much more easily to fall asleep in an unhealthy spot than to keep awake. Sleep renders us *passive* and *negative* to the surrounding IMPRESSIONS of nature, when she receives no salutary influence from the beams of the sun. These impressions become the *positive* force, and the electricity of the air inspired by the lungs enters the system, disturbs the nervous force and the circulation, throws the whole out of balance, and disease ensues.

In view of the above, it will be readily perceived why one person, even in the wakeful state, will take disease much more easily than another. Those who are firm in mind as a rock, are immoveably calm, and have no fear of disease, even when some startling malady visits their neighbourhood. These will not take it, even if they visit the bedside of the sick. This determined action of their minds throws a constant and powerful current of the electro-nervous force from their brains and systems, keeps them positive to surrounding impressions, and enables them to resist their force. But those who are in constant fear of some disease, who are always complaining of their feelings, pains, and aches, keep themselves constantly unwell by thus concentrating their thoughts upon their own systems, and watching each movement. When fever or cholera

visits their neighbourhood, these are the very persons who are in danger of an attack. Even fleeing to another section will not save them, unless this circumstance should be the means of changing their thoughts and removing their fears. The difficulty is, that fear, as Dr. Mason Good remarks, depresses the vital energy of the muscles, and slackens the motions of life. It causes the mind to shrink back on itself, and to render the system negative to the surrounding impressions of the elements, and thus engenders disease. More than one half the cases of cholera that occur every year, owe their existence to the fears and excitements of such persons, who, if they had not heard that it was in their midst, would not have been afflicted with it.

The cholera is a sudden collapse of the whole cuticle, occasioned by the electricity of the nerves at the surface suddenly retiring to the stomach and bowels. The pores of the skin being closed, the blood and other fluids follow the electricity, and retire internally. The venous circulation is obstructed and weakened, and the fluids seem to rush to the stomach and bowels, and immense secretions ensue. Intense fever and inflammation in the entire alimentary canal aggravate the other difficulties, and the storm bursts in fearful terror. The external and internal parts of the system being thrown out of balance in their electrical action, and the arterial and venous circulation having lost their equilibrium, the most dreadful cramps and convulsions ensue. All that is necessary to effect a cure is, to procure a reaction from the centre to the surface, and thus restore the usual equilibrium between the arterial and

venous circulation, by equalizing the electricity of the system.

What has now been said in relation to keeping the mind positive to surrounding impressions, will account for the well-known fact, that an individual sitting with his back to a current of air while in a state of perspiration, will take cold much sooner than if he faced it. The cause is obvious. The front part of the brain contains the positive electro-nervous forces, under the control of the voluntary powers of the mind, and the back part contains the negative electro-nervous forces, under the control of the involuntary powers of the mind. As the positive forces, under an absolute volition of mind, resist all external impression, so the fact is readily seen why they have more power than the negative forces to resist disease, or any encroachments that may be made upon the system.

It may be now remarked, that the science of Electrical-Psychology, being the doctrine of impressions, throws an immense flood of light on the human mind, and its susceptibility to the most strange and unreasonable impressions in the power of man to conceive. There are some minds so constituted, that it is absolutely impossible for them to resist the impressions that others may make upon them. This science unfolds what was considered an inscrutable mystery in relation to the conduct of several individuals who perished in the excitement of witchcraft. Persons of well-known character—yes, of a *stainless* moral reputation—were executed on their own confession! They were charged with being bewitched, and with having bewitched

others. They pled guilty to the charge, firmly believed it to be true, and, on their own confession, were sentenced to die, and were cut off from the land of the living. They were in the psychological state. Many persons who are naturally in the *psychological state*, have had such impressions produced upon them. They have been made to confess that they were bewitched, and that they had rode on broomsticks through the air to bewitch others, and deserved to die.

Many hundred instances have occurred in our world, where persons charged with murder, have confessed themselves guilty of the deed, and, on that confession, have been solemnly sentenced to die. And yet, before the day of execution arrived, the supposed murdered man was found alive in some distant section, and hurried home just in time to save an innocent fellow-creature from an ignominious death. All such persons were naturally in the *psychological state*, and really believed what they confessed. How many may have, through such means, innocently lost their lives, the opening scenes of eternity alone can disclose. Judges and jurors have yet to learn that no man should be hung on his own confession. If he must die, let it be in the face of the most indubitable evidence, and, even then, let him be recommended to mercy, for often murder, as well as suicide, is committed under some strange hallucination of mind.

CHAPTER VIII.

Much has been advanced in relation to mind and matter, their various operations, powers, and manifestations, and the countless mental and physical impressions of which they are susceptible. Not a little has been said in this work of the electro-nervous force, as the agent of the mind, and how the functions of every part of the system are executed under its energy. It has been proved to be the connecting link between mind and inert matter, and the agent by which the Creator moves all worlds through the boundless fields of space. The connection existing between man and nature, and the relationship he sustains to her as an epitome of the universe has also been shown. As electricity has been made the grand agent that, under mind, moves on all the multifarious operations appertaining to the human system, it may be asked, what proof is there to establish this truth, independent of what has already been offered? If the arguments already advanced to prove that mind touches and moves electricity as its prime agent, are not sufficient and entirely satisfactory, we will then refer to a visible and tangible experiment, the result of

which any one can witness, and thus test the truth of the position.

Let any gentleman of eloquence, feeling, and pathos, strip up his sleeve, and lay his bare arm on a table where it shall be perfectly at rest; let him then repeat some impressive poetry, or any prose sentences of stirring eloquence, paying no attention to his arm till his feelings are moved, and at that instant he will see his arm covered with what are called goose-pimples. If he cease speaking, they will gradually disappear, as his mind sinks into calmness. Indeed, he can see them rise and fall with his feelings and emotions. These are occasioned by the redundant electricity which is thrown to the surface by the strong emotions and positive impulses of the excited mind. These pimples rise up at the root of each hair, and as hair is a non-conductor, and resists electricity, so the internal pressure of the electro-nervous force, propelled to the surface by the mind, causes these minute eminences to arise. Electricity is, in its nature, a cold substance. Hence, when the weather is cold, the air, being dense, contains an excess of electricity and oxygen. These, being inspired by the lungs in greater quantities than usual, brace the system and render these pimples in the same ratio more prominent and visible than in warm weather. This circumstance confirms the proof that it is electricity moved by mind, that causes these to rise when the feelings are excited by an eloquence that causes even cold chills to pass over the body.

But should this not be sufficient to send a bold and firm conviction to the mind of the greatest sceptic,

then we will endeavour to carry the proof still farther, and firmly nail the matter beyond his power to remove it. We will show him how abundant the proof is by which this position is sustained. Let the sceptic place himself on an insulated stool, with his arm entirely bare, and charge his body from a powerful electric machine. The hairs and pimples will rise up even as they do under an intense action of the mind. When the body is electrically charged on an insulated stool, even the hairs of the head rise up erect, and the same result follows when the mind is greatly excited by fear or moved by strong and stormy emotions.

If these evidences are not sufficient to strike the sceptic speechless in his opposition, then let him take a needle, and, after satisfying himself that it has no magnetic power to attract the smallest atom, let him insert it in the nerve of an animal, and it will become sufficiently magnetic to take up fine iron filings. Indeed, there is little doubt that the naked arm, under sufficiently strong and stirring emotions of mind to raise those pimples, would, while in that condition, produce an effect upon the electrometer.

We now perceive why the mind, when involved in trouble and distress, has so powerfully affected the body, not only in bringing upon it various diseases, but often sudden, or even instant death. And we moreover see why the mind, when calm, serene, and happy, when buoyant with hope, and animated with confidence, faith, and joy, has produced such powerful and salutary results in removing pains and diseases. We see why, under the energy of such a favourable state of mind,

warts, and even king's-evil, cancers, and various tumours have been made to disappear.

Dr. John C. Warren, of Boston, Massachusetts, one of the most distinguished surgeons in the United States, states, in his work on tumours, that a lady called upon him to ask his advice in relation to an experiment she thought of trying on a tumour with which she was afflicted. It was to rub it with the hand of a dead person; and, as she had a good opportunity, she asked Dr. Warren whether she had not better improve it. He states that he at first thought of dissuading her from it, but sensible of the power of the imagination, he advised her to try the experiment. She did so, and in a few weeks the tumour disappeared!

Dr. Warren calls it the imagination; but it is the effect of a mental impression, as has just been stated, producing the result by the action of electricity through the voluntary nerves. The philosophy of this simple, and in a few words may be presented.

The old particles of our flesh are thrown off through the electro-nervous force of the involuntary nerves, and by the same force the new particles from the blood are laid down in their stead. Hence the wastes and repairs of the system are about balanced. We change, as already stated, the fleshy particles of our bodies about once per year, and the bones in seven years. While, therefore, the involuntary nerves are keeping up this balance of power between the wastes and repairs of the flesh, so the same tumour that is thrown off once per year, with the other particles of the body, is gradually replaced each year by the same involuntary

electro-nervous force from the new particles of the blood. Over this the mind has no direct control, because it acts through the voluntary nerves. Hence when the mind is under the influence of confidence, faith, hope, and joy, organic activity is heightened, and by keeping the mind upon the tumour while in this happy state, and believing it will disappear, creates a surplus of action at that spot through the voluntary nerves, and this surplus action throws off this surplus protuberance to return no more. Such is the philosophy of what is called imagination.

The point being understood how the electro-nervous fluid removes a tumour, the query may now arise, Why does it heal a wound or cure a disease? In answer to this question, it first should be remarked, that the healing properties are in the individual, or in the electricity of the system, and not in the medicine. And the question, *Why does the electro-nervous fluid heal*, has been indirectly considered in the preceding chapter, when explaining the process of digestion. Because if all things were made out of electricity, then it is certain that electricity contains all the elementary principles, and therefore all the healing properties of all things in being. All the balms, oils, and minerals in existence are contained in electricity, and in their most skilfully combined proportions. This electricity is inspired with the air into the lungs, and passed through the blood into the nerves of the brain, and becomes the electro-nervous fluid. It is the positive, moving power, in all its one hundred elements, and meets the same one hundred kindred elements that compose the body,

and are the negative power. And the positive and negative forces coming together, and the one hundred elements in electricity meeting the one hundred of the same kind in the body, each tending to its own, produce the healing result, on the same principle that they produce digestion, repair the system, and equalize circulation. For a full explanation of this point, it is only necessary to call to mind the remarks on the digestive process in the last chapter, and the whole will be easily comprehended.

This point will now be dismissed, and the attention called to the brain, which is the palace and throne of the mind, where it dwells and reigns.

It has been stated in a former chapter, that each individual has two distinct brains—namely, the cerebrum, which occupies the frontal part of the cranium, filling the principal part of its cavity, and the cerebellum, which occupies the back portion of the cranium. The voluntary nerves belong to the cerebrum, through which the voluntary powers of the mind act, and the involuntary nerves belong to the cerebellum, through which the involuntary powers of the mind act. And though in their intricate convolutions through every part of the cranium, they seem to interweave and blend in ten thousand ways, and both dive into the spine, and there combine to form the spinal cord, yet by some secret charm they preserve their entirely distinct character as to their voluntary and involuntary powers, and thus carry out the separate forces of both brains into every part of the entire system.

Our voluntary powers by which we reason, and by

which we move our limbs and bodies, being the positive force during our wakeful moments, soon tire, and require the refreshment of sleep to restore them. But our involuntary powers, by which the heart and lungs are moved, and the functions of life performed, commence their career of action at birth, and often continue it, without any apparent weariness, for seventy, eighty, or even a hundred years. They, however, tire at last, and also require sleep. But when they sleep, it is death. Natural sleep, which involves the sleep of the voluntary powers only in a state of entire insensibility, is so far on the road to death. It is the half-way house to the land of silence. By natural sleep our exhausted voluntary powers are restored, we wake up refreshed, our weariness has disappeared, and we are prepared for renewed action. There is at the same time another important end gained by our insensibility in sleep. The involuntary powers, being left free from the exciting action of the voluntary powers, were allowed to gradually slacken their movements, and regain their true and healthful equilibrium.

In order that this part of the subject may be distinctly understood, it is necessary to point out the connection between the voluntary and involuntary powers, and the manner in which they may reciprocally affect each other. Our pulsations are more frequent in the evening than in the morning. This is owing to the mental and physical action of our voluntary powers during our wakeful moments. They, being the positive force, trespass upon the involuntary powers, which are the negative force, and hence one grand object of sleep

is to allow the heart to come down to its due natural slowness of pulsation. The voluntary powers, being the positive force, can of course trespass upon the involuntary, till they become tired out and sink to rest in the sleep of death. This will be made to appear by the following circumstances.

In the barbarous ages of the world, criminals have been, in some instances, doomed to die through deprivation of sleep. Guards, who took charge of them by turns, both night and day, were ordered to keep them incessantly awake. This they did by touching them with some instrument of torture, and sometimes with fire, whenever exhausted nature would yield to repose. In such instances the pulsations of the heart are gradually increased above their usual throb, becoming more and more frequent, till between the third and fourth day, when they rise to about one hundred and twenty per minute, which is a fever heat. And so on, gradually increasing, till the seventh or eighth day, when the pulse is only perceived by a tremulous motion, inconsistent with the continuance of life, and the sufferer expires. It will now be perceived that the voluntary powers, by being kept awake, trespass upon the involuntary powers till they too are tired, and fall asleep; but that sleep is death.

It has already been remarked, that when our voluntary powers are exhausted they fall asleep at night, and in the morning we wake up restored. This brought us half way on our journey to the door of death, and well may sleep, in all ages, have been considered its emblem. But when the involuntary powers are entirely

exhausted by pain, by fevers, or by sickness in general, they also require rest, and therefore fall asleep. This is death. Now, if there were no positive organic destruction, and could the laws of chemistry that decompose our bodies be suspended, and could the entire system, blood and all, be kept precisely in the same condition as it was when we expired, we should wake up after a few days in perfect health. This is no revery of fancy, no chimera of the brain, but absolutely and positively true, and in perfect accordance with the principles of philosophy. It may be interesting to pursue this subject for a moment.

In the first place, we know that the serpent and toad species, the alligator tribe, and nearly all insects, fall into torpidity in winter, and in the spring they are aroused from this state in perfect health, and with regenerated vigour. Not only their voluntary, but also their involuntary powers were asleep. The breathing lungs and throbbing heart were motionless, and the circulating blood was stilled. The racoon and several other species of animals burrow, and fall into a torpid state as winter approaches, and remain till spring without any sustenance whatever, and then make their appearance without any loss of flesh. In all these creatures the *foramen ovale*, an opening between the auricles of the heart, never closes, and hence they can live without breathing.

It may, however, be said, that this is by no means applicable to human beings, for they cannot live without breathing. How then do we live without breathing, or even without the throbbing of the heart, or the

circulation of the blood, till we were born into existence? The answer is that the foramen ovale was not closed, but generally closes soon after our birth takes place. We know that the new-born infant requires but little air, and can live where we should be smothered and perish. Again, there is occasionally an individual in whom this never closes. It is true, that these instances are exceedingly rare, and such persons are liable, when disease or pain exhausts the involuntary powers, to sink into a torpid state, which has been mistaken for death. The lungs and heart suspended their motions, the blood ceased to circulate, and the limbs grew stiff and cold. Many in this condition have been prematurely buried, came to life, struggled, turned over in their coffins, and perished. On being disinterred, they have been found with the face downward. Some, placed in tombs, have revived, been accidentally heard, and fortunately rescued. And though they expired with a distressing disease, yet they awoke to life in health.

An instance of this kind occurred at New Jersey, United States, where an individual was apparently in a state of death. He was cold and motionless. The lungs heaved not; the heart in its pulsations was stilled; the blood was stagnated in its channels, and had ceased to flow. His funeral was two or three times appointed, the friends and neighbours assembled, and through the entreaties of the physician it was postponed to another time. He at length awoke from this state to life, and awoke in health. Some call this singular condition, where circulation is suspended, a trance; but

it is the sleep of the involuntary powers in those individuals only where the foramen ovale is not closed. In all other persons it would be death.

In view of these facts we should be warned not to inter our friends too soon after we suppose they are dead. And as death is only the sleep of the involuntary powers, so dying cannot be a painful process, but one that must afford the greatest pleasure and delight of which we can conceive. It must certainly afford as much real enjoyment to die as to lie down upon our beds and sink into natural sleep. All sufferings arise from the nature of the disease that tires out the involuntary powers, and not from the gasping struggles of the dying. The fatigues, toils, and sufferings of the day, that prepare our voluntary powers for a night's repose, are not to be taxed upon the process of our dropping into natural sleep. This is of itself pleasurable, and so is also the process of dropping into the sleep of death. In this respect it is not "the king of terrors," but the welcome angel of soothing smiles and crowning joys.

It will now be perceived that though the voluntary and involuntary powers of the mind are entirely distinct, and seem to act independently of each other through two distinct sets of nerves, yet there must be some secret link between the two that unites them in one bond of everlasting and indissoluble union. That this point may be settled as accurately as possible, it will be necessary to call the attention to the voluntary and involuntary nerves, to determine the connection between them, and also to ascertain the throne of the mind,

or in what particular part of the brain it may be located.

Though the philosophy of the circulation of the blood has been considered in a former chapter, yet it is now desirable to glance at the position in which the arterial and venous circulation stand in relation to each other, and notice the connection between them, and then see if this will not throw some light on the voluntary and involuntary nervous forces of the brain.

The circulating system is in reality two distinct systems. The *arterial* carries the cherry-red blood, which is *positive*, and ever flows from the lungs and heart to the extremities, and the *venous* carries the dark blood, which is *negative*, and ever flows from the extremities to the heart and lungs. The arterial system, commencing at the lungs and heart, divides into various branches, and these again into others, and so on, till they spread out in thousands of small blood-vessels called capillaries, too minute for the dissecting knife to trace, or the naked eye to see. Indeed, they run out and seem to end, if we may so say, in millions of nothings. At their terminations, and in just as many millions of nothings, the venous system begins. Though there is no visible connection, that the dissector can trace between the two, yet we know that such a connection must exist, otherwise the blood could never pass from the capillaries of the arteries into those of the veins.

As the nervous system must correspond with the circulating system, so these remarks will prepare the mind for a correct understanding of the views to be presented

in relation to the *voluntary* and *involuntary nerves* and the throne of the mind. The involuntary nerves have their origin in the cerebellum,* which is the organ of involuntary motion, wind round in intricate mazes, and form its convolutions. They pass into the spine, and form the spinal cord, a part of which is but the cerebellum continued, and from thence they branch out to the heart, lungs, and to all the involuntary parts of the system, so that motion may be communicated to them by the involuntary powers of the mind. They return through another department of the spinal cord to the brain, and terminate in the medulla oblongata in thousands of nothings, by which is only meant invisible fibres. In just as many thousands of nothings, the involuntary nerves begin—wind round in like intricate mazes, and form the convolutions of the cerebrum, which is the great organ of voluntary motion. They pass into the spine, and form the spinal cord, which is but the continuation of the two brains, and from thence they branch out to all the voluntary parts of the system, so that motion may be communicated to them at pleasure by the voluntary powers of the mind.

It is evident that the same secret and invisible connection exists between the voluntary and involuntary nerves of the two brains, that exists between the arteries and veins of the two circulating systems which carry the positive and negative blood. If this connection between the voluntary and involuntary nerves of

* It is not meant that their origin can be distinctly traced to the cerebellum, though it is supposed their minute fibres must originate there.—*Ed.*

the two brains does not exist, then the *voluntary* powers could not, by their wakefulness, produce the least possible effect upon the involuntary powers, so as to tire them out, and produce death, nor could they even cause the least disease. And on the other hand, the *involuntary* could not produce the least possible effect upon the *voluntary* powers.

The mind is certainly not diffused throughout both brains, because a part of the brain may be destroyed, and the mind still retain all its powers and faculties. If it were thus diffused, being an active principle, it would keep every organ of the brain uniformly excited. Hence it appears most reasonable, that the mind holds its throne between the TERMINATION of the involuntary nerves of the cerebellum and the COMMENCEMENT of the involuntary nerves of the cerebrum. This will appear rational, if we reflect that any sudden, irregular motion of the heart, for instance, or of any other involuntary organ, will instantly convey the warning to the mind, and bid it beware. But this sensation could not be communicated to the mind unless it held its throne between the voluntary and involuntary nerves. This, though difficult to determine, seems to be in the MEDULLA OBLONGATA.* There is the grand seat of consciousness. From the external world through one common nerve, the mind receives all its impressions, and from thence transmits them by electric telegraph to the various departments of his palace—or to speak more phrenologically, to the different organs of the brain,

* See the following chapter for further remarks upon this point.—*Ed.*

and thus manifests the true impression of his character to the world.

In the light our subject now stands, the philosophy of natural sleep can be stated in very few words. Heat expands, and cold shrinks the nerves of the brain. As the *mind* is that sublimated substance we call *spirit*, and is a living being of embodied form, and being the reverse of dead matter, it is its nature to move, and the result of that motion is thought and power. By the shrinking of the nerves of the cerebrum, its motions are stilled, and thought is gone. This is sleep.

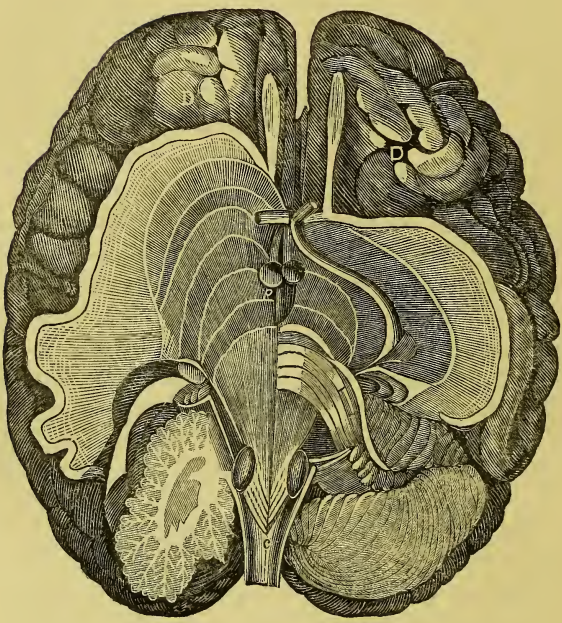
But we have done; and though errors may be detected, time, we know, will correct them. And though sceptics may now sneer, yet we trust that, hereafter, the full weight, importance, and majesty of the subject will be appreciated. We have every thing to hope for in its favour, as a powerful agent to remove disease and pain, and to succour the distressed. To hope for good is present peace.

"Eternal hope! when yonder spheres sublime
Tuned their first notes to sound the march of time,
Thy joyous birth began; but not to fade
When all the sister planets have decayed.
When wrapt in fire, the realms of ether glow,
And heaven's last thunder shakes the world below,
Thou, undismayed, shalt o'er the ruin smile,
And light thy torch at nature's funeral pile."

CHAPTER IX.

It is impossible to avoid the conclusion, that there is a central organ of Consciousness in the brain, where all the other organs of mind concentrate their forces, where their relative influence is appreciated, and their relative claims to superiority weighed and allowed—an organ of consciousness, to which all the other organs of the brain, and all the various external organs of sensation, are merely auxiliaries. All the organs of the brain which are concerned in thought and feeling, converge to this grand centre, and all the nerves of voluntary motion diverge from it.

The organ of Consciousness is located in the *medulla oblongata:* this is the point where sensation terminates, and volition commences; this is the seat of Consciousness. The proof is derived from experiment; for, if the brain above, and the spinal cord below, are both destroyed, consciousness still continues, provided the medulla oblongata and its nerves are uninjured; but if the oblongata is destroyed, consciousness is also destroyed. This is conclusive and unanswerable proof. The precise minute point where Consciousness holds its mysterious throne, whether it is exactly at the place



The engraving represents a brain as dissected by Spurzheim, to show the fibres of the phreno-organs converging to the point *c* in the medulla oblongata; where alone, according to Prof. Grimes's theory, Consciousness is experienced.—*Ed.*

where the pneumogastric nerve is inserted, or the twentieth or the third part of an inch above it, is not yet ascertained; nor is it material: it is certain that it is not below the place where that nerve is inserted; it is certain that it is not an inch above. This is what we know, and all we know, of the location of Consciousness —the sanctum of the mind. There is other evidence which confirms this, but none which so decidedly settles the question. Thus we find that the principal fibres of the brain converge to this point, and we find all the nerves of sensation and of voluntary motion in direct communication with it. Its intermediate position between the brain and spinal cord, the fact that it is possessed by all animals of the vertebrated class, the fact that some animals have more and others less phreno-organs superadded to the oblongata, but none are without this important part,—all conspire to sustain and illustrate the decisive experiments by which this is proved to be the location of the organ of Consciousness.

"The spinal marrow is sensible along the whole of its posterior column; but it also acts only as a conductor of the impression. Flourens destroyed the spinal cord from below, by slicing it away; and he found that sensibility was gradually extinguished in the parts corresponding to the destroyed medulla, but that the parts situated above evidently continued to feel. Perception therefore occurs in the encephalon; and not in the whole, but in some of its parts. Many physiologists, amongst whom may be mentioned Haller, Lorry, Rolando, and Flourens, have sliced away the brain, and found that the sensations continued until the knife reached the level of the corpora quadrigemina; and again it has been found that if the spinal cord be sliced away from below upwards, the sensations persist until we

reach the medulla oblongata. It is, then, in the medulla oblongata that we must place the cerebral organs of the senses, and it is with this part of the cephalo-spinal axis that the nerves of the senses are found to communicate.

"Mr. Lawrence saw a child with no more encephalon than a bulb, which was a continuation for about an inch above the foramen magnum of the medulla spinalis, and with which all the nerves from the fifth to the ninth pair were connected. The child's breathing and temperature were natural; it took food, and at first moved very briskly. It lived four days."—*Dunglinson's Physiology*, p. 83.

The location of Consciousness is not, in itself, a very important or essential circumstance, provided it be admitted that there is such an organ, and that it has a location somewhere in the brain; the philosophy founded upon Consciousness would be the same if its location were utterly unknown. Dr. Reid, the greatest of the Scotch philosophers, advocated the doctrine that Consciousness is a distinct power of the mind, but did not attempt to give it a local habitation. Aristotle and the ancient philosophers considered the brain as the *sensorium*, but did not designate any particular portion as especially entitled to that name. Descartes considered the pineal gland as the seat of the soul. Darwin and many modern physiologists use the term *sensorium* to signify the seat of the mind, wherever it may be. The researches and experiments of the anatomists of France and Italy, which have been made within the last hundred years upon living animals, with a design of ascertaining the offices which are performed by different portions of the brain, have been very numerous, and have cost much labour, and excited

much discussion. Those experiments have, however, been of but little use, except so far as relates to the seat of Consciousness. They demonstrated that life is independent of the brain; that respiration and volition are dependent upon the brain; that the medulla oblongata is the centre of volition and sensation; and that the brain, all excepting the medulla oblongata, may be taken away, and respiration, and volition, and the signs of Consciousness, remain. These experiments seemed to be at war with the doctrines of Gall and Spurzheim, and their fairness was consequently denied by the advocates of phrenology; none of them have considered the experiments as affording evidence of the truth of phrenology, though in reality they do so, if the doctrines here advanced respecting Consciousness are admitted to be correct.

All the phrenological writers seem to have entertained the most vague notions concerning Consciousness. Both Spurzheim and Combe, and indeed all other phrenologians, deny the existence of Consciousness as a separate power of the mind. They seemed to have a notion that each mental power has a Consciousness of its own, in some way, which they did not attempt to define, and probably did not themselves clearly comprehend. The opponents of phrenology have not failed to avail themselves of this weak point in the science. They have triumphantly demanded, "What constitutes *the unity of mind*—the unity of Consciousness in our system of phreno-philosophy?" They have justly characterized the science as a federal republic without a common executive—a circumference

without a centre; and though they were inclined to admit that phrenology has added some useful facts to our stock of knowledge on this subject, it is not itself entitled, in their opinion, to the claims which its friends set up for it, to be considered as a systematic science. There was, indeed, but too much truth in this criticism, and it is hoped that this introduction of the organ of Consciousness will in a great measure obviate not only this difficulty, but many others which previously lay in the way of the metaphysicians. The error of Spurzheim on this point, which was adopted by Combe and other followers of that illustrious man, may be traced in all his works, and in the works of all his disciples. Spurzheim divided the powers of the mind into feelings and intellectual faculties. He reckoned twenty different organs of *feelings*, besides fifteen *thinking* faculties. He and Combe also speak repeatedly of these different powers, as operating sometimes in harmony, and sometimes in antagonism; but did not seem to think it necessary to point out the *common ground* upon which their harmony or antagonism is displayed, and without which it is impossible that it can be displayed at all.

If we say that Consciousness is dependent upon a material organ, it may be objected, that it is then compound in its material constitution, and consequently liable, after death, to be decomposed, and, of course, its identity annihilated. The organ of Consciousness is not necessarily compound. The essential element of the organ may, for ought we know, be an ultimate and indivisible atom of matter, which has the inherent property of being conscious, when placed in proper

relations to the senses and other organs, so as to have this property excited. An indivisible, indestructible atom of matter is immortal in its existence and its identity; and if it is capable of Consciousness, when placed in proper circumstances, then Consciousness is immortal, though it may remain dormant for ages for want of the proper circumstances to excite it. There are some reasons for suspecting that every atom of matter in existence is capable of Consciousness, when placed in the circumstances and conditions favourable to its development.

It is quite certain that Consciousness can exist, in all its power of thought and feeling, in a particle of matter so exceedingly minute, that the most perfect microscope cannot perceive it. This is demonstrated by the phenomena presented by that wonderful order of animals, the *infusoria*, some of which, according to an accurate and mathematical measurement by Ehrenberg and Dr. Prichard, are so diminutive that twenty-five thousand of them can stand in a row upon a line which is less than an inch in length, and eight millions can occupy less space than a mustard seed. Now, when we reflect that each of these animals has limbs, mouth, organs of digestion, an involuntary and voluntary system, with a central Consciousness,—how large a space can we suppose the central Consciousness occupies? That it exists in them, as in us, no one will deny: it is also plain that it does not occupy the whole of the body in them, any more than it does in us; for in their case, as in ours, a limb may be destroyed, and yet Consciousness remain. In them, as in us and all

animals, it occupies a central position, distinct in its nature and function from, yet in connection with, all the voluntary organs. Now, it can be easily demonstrated that Consciousness cannot possibly occupy this central position in relation to the other organs of the animal, without being limited to a space more than two hundred times smaller than that which the rest of the animal occupies. As eight millions of the animals occupy less space than a mustard seed, therefore *sixteen hundred millions of organs of Consciousness may exist in a space smaller than that filled by a mustard seed.**

* *Infusoria.* This term has been applied to the numerous minute animals found in water, which are commonly called *animalcules.*

The invention of the microscope by Hooke, revealed the existence of myriads of living creatures, whose presence was before unknown; and this instrument has shown that a drop of water, though it may appear to the naked eye to be perfectly clear, is perhaps swarming with living beings. Ehrenberg (whose labours have principally contributed to the knowledge of the true nature and structure of the infusory animalcules) has described species which are not larger than from one thousandth to one two-thousandth of a line (a *line* is one twelfth of an inch) in diameter, and which are separated from one another by intervals not greater than their own size. A cubic inch of water may thus contain more than eight hundred thousand millions of these beings, estimating them only to occupy one fourth of its space; and a single drop (measuring not more than a line in diameter) placed under the microscope, will be seen to hold five hundred millions—an amount perhaps nearly equal to the whole number of human beings on the surface of the globe.

Distinct organs of digestion may be demonstrated in all the

Surely, after this, no one will cavil about the organ of Consciousness being supposed to exist in the smallest possible atom of matter, indivisible and indestructible. This course of reasoning is useful in teaching us that the nature of Consciousness is beyond our grasp; that we cannot investigate it by the observation of material bodies; that we can only know its existence in a general manner from experience, and its location by experiments which can only approximate to exactness.

Nor does this investigation shed any light upon the

species. Ehrenberg says, "All true infusoria, even the smallest monads, are organized animal bodies, and distinctly provided with at least a mouth and internal nutritive apparatus."

Speaking of the wonderful power of the infusorial animals to multiply by the mysterious process of self-division, Prof. Ehrenberg says,—

"The possibility of the multiplying of an individual to a million, in less than forty-eight hours, was exhibited in them by the mere process that each single animalcule can divide itself, within one hour, completely lengthwise or across, and after the lapse of one hour's rest, can repeat the same thing. The vast effect of this activity is, that a single animalcule, perfectly invisible to the naked eye, can possibly be increased in four days to 140 billions of independent animalcules. In the polishing slate of Berlin, about 41,000 millions of these creatures form one cubic inch of stone, as may easily and pretty accurately be determined, &c."—*Transactions of the Royal Academy of Berlin*, 1850.

In contrast with these views, it will be interesting to read the following brief extract from Dr. Lardner's Lectures:—

"A star of the seventh magnitude can easily be compared with one of the first, in point of splendour, by the photometer—just as the light of a sperm candle can be compared with that of a lamp. Sir John Herschel has compared the splendour

subject of immortality. If man is necessarily immortal because he is endowed with an indestructible organ of Consciousness, then so is every insect and reptile, and all the infinite variety of vermin that have ever infested the earth; and science offers as powerful an argument in favour of their immortality as that of man. Of all the investigations of scientific men, none has excited the jealousy of sectarians as much as the one we have now under consideration; almost every philosopher who has manifested a disposition to approach the subject fear-

of a star of the sixteenth magnitude with that of one of the first, and has found that the light of the latter is equal to three hundred and sixty-two times that of the former. From this it may be inferred that the distance of a star of the sixteenth magnitude is such that it would require thousands of years for its light to reach our system. These considerations present to our minds most comprehensive views of the economy of the universe. For if light requires a thousand years to come from any of these plainly distinguishable stars, there can be no doubt that it takes twenty times as long to come from others; and what are we to infer from this but that there are visible objects in the universe which 20,000 years ago existed as they are now seen? Light left these stars 20,000 years ago, and has just reached the earth upon which we live. For twenty thousand years past, then, these stars, for ought we know, may not have existed. The objects we see to-day are not the objects of to-day: the Sirius that we see to-day is not the Sirius of to-day. The light by which we see it left that star three years ago; and from that day to this we have known nothing of it. Into what a singular historical state does this view throw creation! Our system, then, exists at an enormous distance from the nearest of the fixed stars; and look in what direction we may, the same chasm yawns between us and it."

lessly, and speak of it with independence, has had the mad-dog cry raised against him of *fatalism*, *materialism*, or *heresy*. Many of our modern authors have been so far influenced by this outcry, that they have evidently suppressed their true sentiments, and smothered their conscientious convictions, to avoid the relentless persecutions which arise from bigotry and superstition. The only road to the favour of this potent and numerous class of tyrants, is to make a profound mystery of every thing relating to mind; all explanation, or even demonstration, is condemned by them as unpardonable heresy, dangerous to religion, and inconsistent with *their own narrow views* of the Holy Scriptures. Nothing has had so injurious an effect upon the fair and successful investigation of this subject, as even the well-meant interference of these self-appointed theological critics, and nothing can be more injudicious and misplaced than their animadversions. The truth is, the subject is not fairly within their jurisdiction, and therefore they have no right to meddle with it. The immortality of the soul can neither be proved nor disproved by the demonstrations of natural science. We may examine the nerves and the brain as much as we please; we may prove to a certainty that Consciousness maintains its seat in the very centre of the oblongata; we may determine the precise, individual, ultimate atom in which it resides with all its prerogatives, where it receives its impressions through the senses, and sends forth its mandates through the motor nerves; we may prove that it is dependent upon the various phreno-organs, the currents of Etherium, and their modifications in the

different avenues; and yet the subject is as far beyond our comprehension as before; we can discover nothing that illustrates or illuminates immortality. If all was doubt and obscurity when we began the search by the light of nature, reason, and science, it is equally obscure now; and from the nature of the subject it could not possibly be otherwise. We have come to the wrong place to learn the nature of the immortal principle of the human soul, or to find evidence for or against this important doctrine. Suppose it proved that Consciousness in this temporal life does actually depend upon a compound material organ, which at death is decomposed so as to render Consciousness by that organ impossible; suppose this demonstrated, beyond all question; would this be admitted as decisive proof that the soul is not immortal? Again, suppose it demonstrated that Consciousness is dependent upon a single indestructible atom; would this be sufficient to satisfy us concerning the immortality of man? We may conjecture what we will, and speculate until we have exhausted all the resources of our ingenuity, without solving the question of our future destiny. Consciousness certainly does exist in man and every other living animal, and has its seat at the point where sensation terminates and volition commences; this is all that we can know. The condition of human Consciousness after death is a matter of religious faith, but not of scientific knowledge.

Immortality is like one of those fixed and beautiful stars, that cannot be perceived by the unaided natural eye; but divine revelation is like a powerful telescope, which brings that star clearly to our view. Be it,

then, hereafter remembered, that "eternal life and immortality is brought to light through the gospel of Jesus Christ," and not through anatomy and physiology, nor any other department of scientific investigation. The subject is infinitely beyond the reach and above the comprehension of finite intellect and human reason. If any one wishes to find evidence of the immortality of the soul, let him go to the Bible. If he rejects this testimony, he may be assured that he will find it proved nowhere else. He will look to human science in vain —it can only lead him to the grave, and there leave him. History may reveal to him, that man has, in all ages, and under all circumstances, savage and civilized, manifested

> "This pleasing hope, this fond desire,
> This longing after immortality;"

but this affords him no assurance that his longing will be satisfied. In vain, then, do we send out science in search of immortality for the soul; like Noah's dove, it returns again, unable to find a resting-place even for itself; but divine revelation, like the second dove which Noah sent out, comes to the believer with its beautiful wings illuminated by reflections from the rainbow of eternal hope, bearing the olive branch, the emblem and assurance of rest and peace from all the storms of a troubled world.

In whatever direction we turn our eyes to the works of nature's God, we find evidences of design; and whenever we are able to understand his designs, we are forced to acknowledge their wisdom. Let us, then, inquire, What was the design of the Creator in bestow-

ing Consciousness upon animals and man? Why could not all their actions have been involuntary, as one class of them actually is; and as all the actions of vegetables, in all probability, are? Why was it necessary—when organized beings advanced from the condition of vegetables one degree upwards in the scale—why was Consciousness added?

This has been answered by saying that Consciousness was given that the animal might be capable of enjoying its existence. Why, then, was not Consciousness given to vegetables and minerals? Besides, Consciousness is often attended with suffering; and, in some instances, animals seem to suffer much more than they enjoy. This cannot, then, be the answer. When the question is applied exclusively to man, it may be answered, that Consciousness was bestowed because he could not otherwise have been made an accountable being; but this will not be given as the reason why Consciousness was bestowed upon the lowest animals; nor will it enable us to explain all the instances of human Consciousness. Suppose another reason, viz. this: *Consciousness became necessary, to enable the animal to act with reference to external objects, which are not in contact with his organs.* Involuntary and unconscious actions are always performed upon objects which are in contact with the organs. When the earth first emerged from its primitive condition, so that organized beings began to live upon it, their first actions were probably altogether involuntary; and when the condition of the earth so far improved as to render the introduction of

animals possible, those animals were but a single step in advance—but one degree superior to vegetables. Accordingly, the lowest animals differ from vegetables only in this, that they act upon objects which it requires a movement of their extremities to bring into contact. This is the reason why vegetables, having no Consciousness, have no muscular motion; nor do they need any, since all the objects which require their action are in contact with their extremities. Vegetables have propensities to breathe, to eat, to enjoy the light, &c.; if Consciousness were added, and nothing more, we should have a *vegetable conscious of its wants*, but unable to move to get into contact with the objects which it needed—unable even to perceive them. Now, add perceptive organs and contractile muscles, and it would be a *conscious animal*, with the same wants, and consciousness of those wants; and, in addition to these, it would have a Consciousness of the existence, location, form, colour, flavour, and weight of the objects which it needed, and the means of moving its extremities, and directing them so as to come into contact with these objects. The animal may still be destitute of reflective organs, and, therefore, unable to perceive the consequences of his actions. He has the very lowest animal propensities, and the very lowest perceptive organs, superadded to Consciousness. He is urged irresistibly by his propensities to aim at certain objects, without reflection, without fear, and without hesitation or forethought; danger and death will be unseen and undreaded. He will be incapable of acting with reference to any objects which are beyond the limits of

present perception, direct and immediate. He has no memory, for that can only exist with reflection. Memory is a power which connects the past and present, and depends, in some degree, upon the reflective powers, of which we have assumed the animal to be destitute. As he cannot avail himself of past experience without memory and reflection, he is a mere conscious machine, moved by external stimulus. Now, add reflection and the higher propensities, and he is a different being; he remembers past experience, and profits by it, to avoid danger, wounds, and death. He represses his present active lower propensities, because reflection stimulates cautiousness, and other restraining powers. He is no longer urged irresistibly to act from the immediate present external stimulus, but he is operated upon by the treasured stimulus of the past, furnished by memory and applied by reflection, concerning the future effect of present conduct. Thus we conclude that Consciousness is necessary to produce contact with that which is within the range of perception at the present. Reflection and memory, and the high propensities, are necessary to enable us to act with reference to that which is absent from perception at present, but will be likely to be present to us hereafter. This analysis gives a very different character to memory from that which phrenological writers generally have bestowed upon it. They have made it depend altogether upon the perceptive organs; but they are here made mere vehicles, modifiers and repeaters of impressions which are acted upon by other and higher powers of mind.

CHAPTER X.

THERE are three kinds of senses, viz.: the external, the internal-corporeal, and the inter-phreno.

1. The EXTERNAL SENSES are those which convey impressions from the external world to the perceptive organs, and give the ideas of flavour, sound, colour, form, &c.

2. The INTERNAL-CORPOREAL SENSES are those which convey impressions from the different organs of the body to appropriate organs of the brain, and produce the *feelings* of hunger, thirst, suffocation, pain, and various other *bodily* feelings. These senses, or nerves, are in connection with certain appropriate cerebral organs of the propensities which are dependent upon them. Thus the organ of Alimentiveness is connected with the stomach by means of a nerve, (a part of the Pneumogastric,) which conveys from the stomach impressions to Alimentiveness; another branch of the same nerve conveys to the organ of Pneumativeness impressions from the lungs producing the feeling of suffocation. There is an infinite number of nerves which convey impressions to the organ of Sanativeness, and through its means produce the feeling of *bodily*

In the annexed engraving, the fibres of the brain are represented as proceeding from the convolutions at the surface of the brain, and all converging to a point at *c*, where consciousness is presumed to be seated.

The numbers from 1 to 14 designate the convolutions; *m*, *n*, and *o* are parts which it is not necessary to describe in this work: the only important point to which I wish to call the attention of the reader is, that the fibres do actually proceed from the convolutions to the medulla oblongata, and there converge to a common centre; and thus anatomy sustains the Phreno-Conscious theory which our author was the first to advance.—*Ed.*

pain in all its varieties. These senses have never been properly investigated and explained by any writer upon physiology, and the organ of Sanativeness was unknown until the author called attention to it in 1839.

3. THE INTER-PHRENO SENSES are those which convey impressions to the phreno-organs from the organ of Consciousness, and *from* the phreno-organs *to* the organ of Consciousness. They produce a communication between Consciousness and all the phreno-organs.

No writer upon Phrenology has, prior to this time, suggested that this class of senses must exist; indeed, they could not do so before an organ of Consciousness was introduced. But when we admit an organ of Consciousness, to which every phreno-organ sends impressions, we are forced also to admit the existence of fibres which connect Consciousness with the phreno-organs in such a manner as to allow of intercommunication.

Let us illustrate by an example. A man is hungry, and eats food. Now, there are several links in the chain of causes and effects, which resulted in the act of eating, and we shall find it impossible to constitute a perfect chain without introducing the inter-phreno senses as connecting links. 1. The stomach, being in a condition to need food, produces an impression upon the end of the nerve, viz., one of the internal-corporeal senses. 2. This impression is conveyed (as in the electric telegraph) to the other extremity of the nerve, where it is connected with the organ of Alimentiveness. 3. The organ of Alimentiveness, receiving the impression, is excited, and sends an impression to the central

organ of Consciousness, thus producing a state of Consciousness which we call *hunger*. 4. The organ of Consciousness is excited by the impression, and immediately, from its central position, radiates and transmits the impression to the phreno-organs *through the inter-phreno senses*. 5. Each phreno-organ being thus excited, sends, in return, to Consciousness, an impression peculiar to itself. Now, as Consciousness cannot fully recognize more than one impression at a time, the most powerful impression forces itself upon Consciousness first, and the next impression follows, and so on, in the order of their relative force; this succession of impressions constitutes what is commonly denominated *a train of ideas*, or *a train of thought and feeling*. The impressions upon Consciousness, produced by the *intellectual* organs, are called *thoughts;* and the impressions from the *propensities* are called *feelings*. When, in the above example, the impression from Alimentiveness produced the state of Consciousness which we all recognize as *hunger*, the impression was radiated through the inter-phreno senses, and the perceptive organs were thus aroused, particularly the perceptive organ of Flavour. These perceptive organs, being *thus* excited, not by impressions from external objects, but by an impression from the central Consciousness, could only send in return an impression which was but an imperfect *repetition* of a former impression: this kind of impression is the foundation of *memory*. 6. In the case supposed of the hungry man, those impressions from the perceptive organs which constitute memory, only serve (when transmitted through the inter-phreno

senses and Consciousness to a propensity like Alimentiveness) to excite it to a still greater degree, and cause it to send to Consciousness a still more powerful impression. At length the propensity pours upon Consciousness such a powerful current of impressions, that Consciousness can no longer be relieved by transmitting them through the inter-phreno senses to the phreno-organs: another outlet is therefore resorted to. 7. Under these circumstances, *the motor nerves* receive impressions or currents, *through* Consciousness, *from* the phreno-organs. The motor nerves convey impressions from the organ of Consciousness to the muscles 8. This produces those contractions of the muscles which we call voluntary motions, and in the example of the hungry man, those motions were directed to food; taking it, putting it into his mouth, tasting it, chewing and swallowing it, and continuing this operation until the stomach ceased to send impressions along the nerve to Alimentiveness.

It will be perceived that, according to this view, there are two modes in which phreno-organs may be excited: one is directly through the senses, and the other is through Consciousness. Thus Alimentiveness was excited, first by an impression from the stomach; and secondly, by an impression *through* Consciousness from the external senses.

It would seem, however, that all the phreno-organs are not capable of being excited in these two ways; some phreno-organs receive no impressions, except through consciousness; this is the case with the reflective organs, and most of the higher propensities.

The reflective organs do not receive any impressions directly from the external world, but the perceptives receive them and convey them to consciousness, and from consciousness the reflectives receive the impressions and respond to them. It may be a question whether all trains of thought originate through the external and the internal corporeal senses, or whether the brain may not be sometimes spontaneously excited by operations of its own, which are only dependent upon the circulation of the blood. It may be, in this respect, analogous to the liver and other glands, which are spontaneously excited merely by the circulation.

It is certain that trains of thought which originate in bodily conditions, and which are excited through the internal-corporeal senses, are continued, and, by the aid of the principle of causality and comparison, lead to other thoughts, which seem to have no immediate relation to the things that first started the train of thought. Thus a slight toothache may remind one of a friend who once had a similar toothache, and this may lead us to think of his wife, and then of her sister, and so on, until our pain is forgotten.

This theory enables us to explain the faculty which we have of using all the powers of the mind in reverie, when neither our senses nor our muscles are active—when we are at rest, every muscle relaxed, our eyes shut, and our external senses inactive, though we are perfectly awake and the mind active upon subjects which are far distant and events that are long past. For after one phreno-organ has been excited so as to impress consciousness, this may cause a long train of

spontaneous thought through the means of the inter-phreno senses.* It also enables us to understand how it is that thinking on some absent object sometimes produces a movement of the muscles: thus, thinking of a beloved child, and imagining it falling over a precipice,

* M. Victor Cousin, in his strictures upon Locke, (See *Professor Henry's translation of Cousin, entitled "Cousin's Elements of Psychology,"*) claims much credit for having exposed the deficiency of Locke's system in relation to spontaneous operations of mind, independently of external sensation. Locke makes all ideas proceed from sensation; and his system has, therefore, been somewhat reproachfully denominated the *sensual* or sensuous system. He denies the existence of *innate* ideas.

Cousin acknowledges that ideas are not innate, but insists that the mind has the inherent power of producing ideas which do not come through sensation. He contends that sensation *occasions* the mind to evolve ideas which sensation itself could never have produced. Cousin charges, that the doctrine of Locke leads to materialism and fatalism, and claims that his own doctrine is free from this fault; but it would be easy to show that Cousin's doctrine is more directly opposed to revelation than that of Locke; for Locke candidly acknowledges that his philosophy is imperfect, without faith in divine revelation; whereas Cousin vainly supposes that he avoids this necessity, by showing that the mind possesses powers and receives ideas which are independent of sensation. Cousin does not seem to suspect that there may be *internal material organs* which are capable of being *spontaneously* active, or of being called into action "*by occasion*" of sensation. This has been shown to be the case, in this work, and, of course, Cousin, Locke, and the author, are in the same dilemma,—which forces us to admit, that the tendency of all human philosophy is to materialism and fatalism. The only way of escape is, to admit, with Locke, that divine revelation is above all philosophy.

causes an involuntary start, as if to prevent it; thinking of delicious food causes the mouth to water, and move as if in the act of enjoyment; and so of other corporeal enjoyments. The explanation is, that consciousness first received an impression from some phreno-organ, which, when transmitted to Alimentiveness, was adapted to excite it, and to cause it to send an impression to Consciousness with a force which, increasing in energy, at last forced its way through the motor nerves to the muscles, and produced the movement of the mouth. This theory enables us to explain the manner in which dreams are produced when the brain is partially asleep. It also shows, that even supposing it true that touching a certain part of the head excites the phreno-organ touched, yet through the inter-phreno senses the excitement may be so complicated with other parts of the brain as to render it impossible to draw any correct inference in regard to the nature of the organ touched. The relation of the inter-phreno senses to the organ of consciousness must be understood in order to fully explain the philosophy of clairvoyance and of credencive induction, as the reader will perceive when he comes to the remarks on those subjects.

CHAPTER XI.

The spontaneous phenomena and the experiments in Electro-Biology, Electro-Psychology, and Etheropathy, may all be explained by the application of the following principles:—

1. Imperfect insulation of the subject, exposing him to abnormal induction, both spontaneous and artificial.
2. Will of operator producing induction.
3. Credencive induction, or self-induction.
4. Sympathy produced by induction.

1. Imperfect insulation, *exposing the subject to induction.* The terms *insulation* and *induction* are borrowed from the science of Electricity. The word *insulation* is used in this work to signify the peculiar structure or condition of the organs of man and animals, which is designed to protect them from the influence of surrounding and external currents of Etherium. This principle of insulation is absolutely necessary to protect the organs from the undue influence of abnormal currents, by which we are continually surrounded. (See *Cuvier's Lectures on Physiology.*) The numberless nerves are continually conveying impressions in all

directions throughout the whole constitution. Sometimes we find different functions performed by nerves which are so near to each other that no anatomical skill can point out the precise line of separation; and yet it can be proved, by the most decisive experiments, that one of the nerves conveys a motion of Etherium in one direction, while another conveys motion in the opposite direction, and notwithstanding their contiguity, there is no interference.

Just as two contiguous railroad tracks admit of the passage of cars in opposite directions without jostling or collision, so do these nerves convey the motions of Etherium in opposite directions.

In common electric experiments, the wires can be made to convey electricity in opposite directions, even though the wires are in contact, provided they are coated with glass, resin, varnish, or shellac; but if the insulating varnish is removed, the currents interfere with each other, and the weaker currents become neutralized or modified by the induction of the more powerful currents.

Induction is a term which signifies the communication of motion from one body to another, or from one organ to another; thus, when a current of electricity is communicated from a body which possesses it, to one which does not, the motion or current in the latter is said to be *induced* or *inducted*, and the process is called *induction*.

If a large magnet, or a galvanic battery, is brought near a small mariner's compass, the compass needle is immediately affected by induction; that is, the current

of electricity is communicated from the large magnet to the needle.

Thus we have seen that the object of *insulation* is to prevent *induction;* and what we do in an imperfect manner by human skill in a galvanic apparatus, nature does with wonderful perfection in organized bodies.

The Susceptibility of the subject depends upon two conditions; *first*, the weakness of the forces of Etherium evolved in the capillaries; *second*, the imperfection or weakness of the insulation.

Some organs are susceptible, while others are not: the reason is, that some organs are more perfectly insulated, or else they evolve more powerful motion of Etherium. Some organs are susceptible to one operator, but not to another. There seems to be a natural tendency of the organs of the operator to induct the corresponding organs of the subject—Combativeness in operator to induce its own current in Combativeness of the subject; Sanativeness of operator to induct Sanativeness of the subject; and so of all the other organs, both of mind and body: this kind of induction is denominated *sympathy*, or *same condition*.

If, therefore, Sanativeness is large in the subject, and small in the operator, it would be difficult for that operator to induct that organ, though he might succeed in inducting many others in the same subject: another operator may, if his Sanativeness be large, succeed in affecting the Sanativeness of this same subject.

The subject may be inducted by his own organs; that is, one organ may induct all the others, and produce paralysis or monomania. Again, the subject may

be inducted by external inanimate objects, as in the cases of spontaneous somnambulism.

The susceptibility of the subject is greatly increased by his passiveness, and the consent and submission of his mind, while the powers of the operator are in their most active condition. It is also increased by the absence of all exciting stimuli, such as noise, or anxiety, or hunger, or pain. All these facts go to establish the opinion that susceptibility is, in some degree, related to the weakness with which the currents are evolved from the organs of the subject.

2. Will of operator producing induction. By the term *will*, is meant the effort which we are conscious of making to accomplish an end: for instance, when we determine to raise the arm, we immediately make an *effort*, which is called *willing*, and instantly the arm rises. In this case, the nerves of the arm were inducted by the brain. Now, when a person sits before us with his eyes closed, and we will his arm to rise, we make the same effort that we did when we raised our own arm; and if his arm actually rises at our will, we conceive that the effect was produced in the same way in both cases; that is, by the induction of a current of Etherium from our own brain to the nerves connected with the arm, causing the arm to perform its function.

If we *will* the arm to feel sore, as if burnt, and the subject instantly moves his arm, and complains of its being hurt, the principle is the same; we induct the requisite nerves of sensation by the will, so that a force passes to Sanativeness from the arm, and produces a painful state of Consciousness. Why cannot we cause

a *sensation* in the subject as well as a *motion?* In both cases, there is merely a force of Etherium from the brain of the operator; but in one case the current moves down to the arm of the subject, in the other it moves up to the brain; of course, in one case it produces motion, in the other sensation.

There has been much discussion among metaphysicians concerning Identity and Consciousness. The question is often asked, What phreno-organ is it that says "*I?*" and what is it that says "*I am?*" and what says "*I will?*" What is *will?*

These questions are answered simply and plainly, thus:—The notion of *I* and *I am* are the result of the operation of the reflective organs. Many animals never have such an idea. *I am*, and *I was*, and *I shall be*, are notions which are related inseparably to each other, and to the comparing and connecting power. Many beings are *conscious* that never have reason enough to raise the idea of *I am*. An infant is *conscious*, but does not think of *I am*, or *I was;* and it is not until they learn to compare themselves with other beings, that they distinguish *I* from other beings in their reasoning. Doubtless the first efforts of the infant mind in reasoning, teaches them the notion of *I* and *I am*, and a little more of the same kind of reasoning teaches them the notion of *I was* and *I shall be.*

Identity is an idea that I am the *same* person that I was, and this is certainly a notion which can only arise upon Comparison and connection, or Causality.

I will is an expression which is used in two senses: one signifies *I desire*, and the other *I am determined.*

I desire is a notion excited in Consciousness by any active phreno-organ, when stimulated by some object.

I am determined is a notion produced in Consciousness, principally by Combativeness, Firmness, Imperativeness and Hopefulness, under circumstances of opposition and difficulty.

The idea of *I can* is generally produced by Hope and reflection; the idea of *I myself am superior*, from Imperativeness and reflection; the idea of *I love*, from Adhesiveness, Comparison, and Causality; the idea of *I hate*, from Destructiveness and reflection. In short, it is reflection that says *I*, and impulse says *will*. In operating, when we *will* that the subject shall be in a certain state, that which *wills* is Imperativeness, Firmness, and Hopefulness, and any other impulses may add their influence, if they are interested in the result. When one impulse desires one thing, and another the contrary, the *will* is the predominant impulse.

3. Credencive Induction. It has been ascertained, that when a subject is but slightly affected, and when any of the operators in Mesmerism, or Neurology, or Pathetism, would send him away as unprofitable,—merely by the application of a very simple stimulus, which every one has always at hand, the subject may be brought perfectly under your control. This may be done by a simple assertion.

Assert to the subject, in a decided tone, for instance, "*You cannot open your eyes,*" and if his eyes were shut when you made the assertion, he cannot open them afterwards until you again say, "*Now you can*

open them," or something to that effect. Again, say to the subject, "*Put your hands together, and you cannot separate them.*" If, now, he puts his hands together, he will try in vain to separate them until you reverse your assertion. Say, "The floor is hot," and instantly to him it seems hot. Assert that, "Yonder is a lion," and he immediately believes it and sees it; or tell him that he is himself a lion, and he instantly assumes the character, and begins to roar and show his teeth and claws.

It has long been known that very susceptible subjects may be deluded and willed into almost any state of mind; but it has not before been known that it requires less susceptibility to perform these experiments than any other. It has not been known that it is on this principle that most of the successful experiments in Neurology, Pathetism, and Hypnotism are performed. The gentlemen who have conducted these experiments were evidently ignorant of the real agent that produced the phenomena.

It is a fact, capable of being easily demonstrated, that nearly all subjects can be made to believe any thing, or to assume any character, or to conform to the wishes, expressed or implied, of the operator; and this can be done when they are affected in the very least degree, while they are wide awake, and appear to know what they are about. They cannot resist an *assertion*. Put your words in the form of an inquiry, and they are powerless; for instance, ask the subject, "*Can you raise your hand?*" and he will raise it; but ASSERT, "*You cannot raise your hand,*" and he cannot do it.

The same is true of any other assertion, as, "You cannot speak," "You cannot speak without lisping," "You cannot speak without stuttering," "You cannot stop," "You cannot rise," "Your finger is wounded and bleeding," "Your hair is wool," "Your hands are iron," or "fish" or "fire," "You are a child" or "an old man." Any of these assertions produce an instantaneous effect.

Let the subject suppose that you are going to excite the organs of his brain—let him believe that you expect, when you touch a certain part of his head, that he will be affected in a particular way, and he will generally use all his ingenuity to learn your wishes, and make his utmost endeavours to oblige you and accomplish your expectations. This is a fact which is undeniable, though it has not hitherto been explained.

Say to the subject, "I am going to excite your Combativeness, and you will be very angry." Now, touch his Combativeness, and he will be angry; touch his Tune, and, if he knows what organ you intended to touch, he will begin to make music. If he even suspects what you wish, he will oftentimes act accordingly. But if he has no idea what you expect, he will do nothing. If the subject does not know the location of any organ, and you say nothing and give him no clew to your designs, *you cannot excite his organs by merely touching them.* If you succeed in exciting his organs when he is ignorant of your intention, it is done by *Will*, by *Sympathy*, or by *Clairvoyance.*

In order to explain these experiments, we must first understand the nature of the organ of *Credenciveness*, the impulse to act upon testimony or assertion. It

is a *conforming social impulse, and its natural stimulus is an* ASSERTION.

1. It is an *Impulse*, and operates like every other impulse. We must, in order to understand Credenciveness, therefore, acquire a clear notion of the manner in which an impulse operates. It produces a tendency to *act* in a peculiar manner. It sends an Etherean force through the motor nerves to the muscles, and either originates a motion or modifies a motion which other impulses originate. It antagonizes other impulses which are opposed to it, and neutralizes them or combines with them.

When greatly excited by any extraordinary stimulus, it governs the individual, and produces such uncontrollable tendencies to gratify itself, as to constitute a peculiar species of monomania. This is a general definition and description of an impulse such as Credenciveness is.

It produces a state of Consciousness peculiar to itself; and when predominant, it causes other impulses and the intellectual faculties to conform to it, and act as its auxiliaries.

2. It is a *social* impulse, and every social impulse gives a tendency to act with reference to others, and for the benefit directly or indirectly of others. Social beings are the objects from which its stimulus proceeds.

3. It is a *conforming* social propensity. The whole group to which it belongs have this peculiar character, that they all tend to conform to the wishes, feelings, actions, commands, and assertions of others.

4. The appropriate stimulus of Credenciveness is

assertion. It is the highest organ of the social class, and distinguishes man from the lower animals as much as any other impulse, and perhaps more. Were it not for this, human society would be reduced to an equally degraded condition with that of the brutes.

The child believes and acts upon the assertion of his parent, instinctively, and thus avails himself of his experience and knowledge. Courts of justice are founded upon the principle of belief; they act altogether upon the testimony and assertions of others, and not from their own experience and knowledge. History and tradition is based upon it; indeed, all literature, and all the modes in which we record or communicate the acts, the experience, or the thoughts of others, are dependent upon Credenciveness. Any expression of others excites it; but an *assertion* made by one who is supposed to be of superior authority, power or knowledge—this is its highest stimulus, and excites it to its highest degree of activity—even to monomania. When Credenciveness is uncommonly large, and Firmness and the Reflectives small, an assertion, however extraordinary, is received with confidence. It requires but little aid from abnormal induction to render some men mere machines in the hands of those whose assertions they believe.

Now, we must consider that the tendency of inducting a subject, is to bring him under the influence of the operator; to make him submit and sympathize, conform and confide in the operator. Its first and most powerful effect is upon the conforming socials, to excite them, and to exalt them to monomania. The conforming

socials were designed to be stimulated by the words and examples, the actions and commands, of others. Their very nature is such as to cause their possessor *to be influenced.* They are peculiarly open and susceptible to all kinds of stimuli which tend to give others an influence over us; and, of course, they are peculiarly susceptible to the influence of the currents of Etherium, which proceed from the operator. If they are more affected by his attempts to influence the subject, than any other organs are, it is because it is their function—their nature—their vocation.

Let us now consider, that when a subject is perfectly inducted, the mere silently expressed *will* of the operator can influence him, and cause him to move or feel in any desired way. No assertion in this case is necessary—no sound—no sign—no external muscular motion. There is nothing but the operation of the silent but potent will.

On the other hand, let us consider, that when the subject is not inducted, but is in his ordinary and normal condition, the will of the operator has no effect unless expressed in a certain way, by voice or other sign, which the subject perceives by the aid of his senses. Here we have two opposite conditions; one in which the subject is insulated from the influence of the operator, except in a certain way which the Creator has prescribed; the other, a condition in which the insulation is entirely overcome, so that every motion of the operator is a cause of motion in the subject.

Now, between these two extreme conditions of perfect induction and non-induction, there are, of course, many intermediate states or degrees of induction.

What is the first degree? What organs (in most cases) first feel the effects of the inducting process? The conforming socials, and especially *Credenciveness*; for, if an assertion produced a certain degree of influence upon the mind of the subject before the induction commenced, it produces more and more as you proceed. At first your *assertion* that he cannot open his eyes or raise his hand, merely renders the movement difficult; next, it is more difficult; next, it can only be done by a vigorous effort; then it cannot be done at all.

You can generally affect his eyes first, then his mouth slightly, then his hands. His hands will at first be so slightly affected, that when you assert that he cannot separate them, you must hold them together lightly by pressing upon them; next they will adhere without pressure; and, finally, proceeding from one step to another, with a degree of rapidity very different in different subjects, we acquire control over every power of mind and body, so that he will frown, or smile, or weep, at our command or assertion merely. If we proceed still farther, we gradually, in many subjects, acquire a power of moving their organs by merely willing, and without expressing our will by any sign; but, in these cases, though neither assertion nor sign is necessary to influence the subject, yet an assertion, if made, is wonderfully potent. The influence of assertions, and the disposition to conform, is in proportion to the degree of induction of the conforming socials. It is generally supposed by those who see experiments of this kind performed, that the operator accompanies his assertion by an effort of his will. This, however, is not

the case. If the operator makes an assertion, it will have nearly as much effect, though he wills that it shall have no effect whatever.* This proves that it is the assertion and not the will. We are so constituted, that we take the assertion of our fellow-beings as the true expression of their will, and we sometimes believe them in spite of all our efforts to resist the belief.

In order to understand these experiments, another peculiarity of the mind must be taken into account, with which keepers of the insane are familiar; and that is, that the nature of *delusion* is such that the patient or subject is positive that he is not deluded. To him it seems like reality and truth; his Consciousness does not inform him that one of his propensities has obtained a mastery over the rest, and is misleading him. It is common to see insane persons believing themselves to be animals, plants, or glass vessels; and the most positive and palpable proof of their error has no convincing effect upon their minds. Indeed, we see many persons, who are generally supposed to be sane, who, being possessed with a favourite idea, seem incapable of appreciating the most conclusive arguments which show its erroneousness. In these cases there is most likely a slight degree of monomania.

We also find many insane persons who are rational on every subject but one, and the instant that is mentioned they betray the highest degree of monomania.

* This fact directly controverts the commonly received opinion upon this subject, and cannot well be explained except by the original theory of Prof. Grimes, viz., the induction of the organ of Credenciveness.—*Ed.*

The *antagonism* of the organs must also be understood, in order to explain the hesitation, doubt, and wavering, which subjects often exhibit when but slightly affected. It is common for them to deny that they believe the assertion of the operator, and yet they will act as if they do believe it. For instance, say to the subject, "*That piece of silver is red hot, and will burn you if you touch it.*" He will perhaps answer that he does not believe it, and will advance towards it, and put forth his hand to touch it; but the very way in which he moves, shows that he suspects, at least, that it may be true. He first holds his fingers very near, then cautiously touches it, and perhaps expresses his surprise that it is actually hot. Sometimes, though rarely, he will say, "I know it is not so, though it seems so." Ask him how he knows that it is not really so, and he will answer, that former experience, and the testimony of all around, that he is deluded by the inductive operation, make him think that it must be so, though his senses assure him that they are all mistaken. This contradiction arises, in a great measure, from the opposing effects of other organs, especially Imperativeness and Firmness. They are the natural antagonists of the conforming socials; they give a tendency to act independently of the influence of others; and it is from them that the suggestions arise in opposition to the assertions of the operator, when those assertions contradict our own experience.

If the process of induction did not operate as a stimulus to the conforming socials in particular, if it stimulated the governing equally with the conforming

socials, the experiments which depend upon the influence of assertion could not be performed at all.

Such is the nature of Credenciveness, that it responds to its appropriate stimulus involuntarily and irresistibly. In this respect it is like Sanativeness or Pneumativeness, or any other impulsive. When Sanativeness receives its appropriate stimulus, it instantly acts, and with uncontrollable power. For instance, when we are wounded or burned, we cannot help feeling pain, for Sanativeness is instantly roused, and produces pain, and a kind of action calculated to relieve the pain. This affection of Sanativeness is irresistible and involuntary; precisely so it is with Credenciveness when excited by an assertion.

But there is another and more complicated process to be explained. When the operator asserts that a piece of silver will burn the subject's finger if he touches it, the assertion, being the natural stimulus of Credenciveness, of course, excites it; the subject touches the piece of silver, and instantly feels pain. Now, pain is a state of Consciousness produced by Sanativeness, and not by Credenciveness; and an assertion is not the appropriate stimulus of Sanativeness. The question is, What roused Sanativeness? If the assertion did not excite it, what did? The assertion excited Credenciveness; and Credenciveness, through Consciousness, excited Sanativeness; according to the principle which has been explained in the article upon the inter-phreno senses. It must, however, be constantly borne in mind, that the brain of the etherized or inducted subject is in a condition which renders it liable to be affected in an

extreme and morbid degree. The principle that one highly stimulated organ may etherize or induct the rest of the brain, or that it may at least act as auxiliary to the operator, is of very great importance in explaining the fact, that a subject can be put to sleep without the will of the operator.

Say, for instance, to a subject, "Sit down, close your eyes, and let me put you to sleep." He sits down, and you put your hand upon him, or stand and look at him, or pretend to look at him, and pretend to be willing him to sleep, though in fact, you are thinking all the time of something else; perhaps actually willing that he shall not go to sleep; yet he does go to sleep just as usual. Now, in this case his own Credenciveness was the principal operator, and inducted all the other organs—neutralized some and made others auxiliaries. Again, say to the subject, "To-morrow at one o'clock you will go to sleep." When the time arrives, he actually goes to sleep, *unless he forgets the assertion.*

Credenciveness may be excited to a peculiar and morbid action by the process of the operator, or by disease; but, when thus excited, it produces the phenomena without any other aid from external influences. This explanation of the nature of Credenciveness, is a key to most of the wonderful experiments and discoveries of Buchanan and Sunderland; of Braid, Hall, and Elliotson. It explains, also, the apparent contradictions and absurdities which embarrassed the celebrated French committee of which Dr. Franklin was a member.

4. Sympathy produced by Induction. When the

inductive process has been completely successful—when many of the organs of the operator have communicated their motions to the corresponding organs of the subject, and have established such a connection that a movement of the operator is immediately followed by a similar movement of the subject, and a feeling of the operator's mind is followed by a similar feeling in the mind of the subject—this is *sympathy;* and by the word *sympathy* is meant a condition of the subject induced by the operator in consequence of a connection and communication between them;—a condition which is the *effect* of a similar condition of the operator. The condition of the operator is the cause, and the condition of the subject is the effect. The currents of force from the organs of the operator to the organs of the subject are the means by which the effect is produced. The *insulation* of the organs of the subject was an obstacle to the currents of the operator; the process of etherean induction removed or overcame the obstacle; the etherean force of the operator, after having first moved the organs of the operator himself, proceeded to the corresponding organs of the subject, and moved them in a similar manner, though in a slighter degree. This is sympathy in a strictly philosophical sense. Sometimes it is so perfect that the very same ideas, thoughts, images, colours, forms, and sounds, which occupy the mind of the operator, are made to occupy the mind of the subject by sympathy.

The operator can put another person into communication with the subject, and then the subject will sympathize with him also in the same manner, and upon the

same principle. The only difficulty is in first overcoming the insulation. When this is done, any person who is put into communication, may become the cause or object of the subject's sympathy. The subject may read his thoughts and feelings by sympathy.

CHAPTER XII.

Many persons suppose they have explained the whole matter, and accounted for the susceptibility of the subject, by saying that it is owing to his *imagination;* but, if this were so, the most imaginative persons ought to be found most susceptible, whereas the very reverse is generally the case. Others attribute the susceptibility to the excessive *credulity* of the subject; but the same objection holds good against this notion, namely, that if it were true, the most credulous persons ought to be found most susceptible; but every operator knows that this is not the case. Thousands of susceptible persons can be shown, whom no one deems either credulous or imaginative, and again, an equal number can be produced of the most weak-bodied, weak-minded, credulous, shallow people on earth, who are not susceptible in any perceptible degree.

Another class suppose that susceptibility depends upon the fact that they are very *nervous;* but they also are mistaken, for it is found that nervous and excitable persons are not as often susceptible as those who are calm and quiet.

Some operators pretend that they can easily tell

whether any one is susceptible or not by his appearance, his temperament, the form of his head, his complexion, or some external signs; but all this is mere pretence: the fact is, no one can possibly tell, by any known signs, who is susceptible and who is not; for susceptibility evidently depends upon some peculiarity in the constitution which is concealed from observation. The nerves themselves cannot be seen without dissection; and even if they could be, it is not likely that any thing in their appearance would indicate their insulation or non-insulation. All our reasoning on the subject is founded upon the analogy of the nervous system to a galvanic or an electric apparatus; and even this analogy must not lead us to infer that the nervous influence and the galvanic influence is identical; for there is no proof, as yet, that there is any thing more than a striking analogy between the two influences.

If any person asks you whether you think him susceptible, your only proper answer is, that *you can only ascertain by trying the experiment.*

When you proceed to ascertain by experiment the degree of any one's susceptibility to your abnormal influences, you must bear in mind the important fact, that the operation which you are about to perform is one in which two *minds* are concerned, and your success and usefulness will depend in a great degree upon your knowledge of the true philosophy of mind.

You must consider that the force which is to produce the result is guided by your own mind. Your own phrenic force is generated by your blood acting

upon your brain, and you will be more powerful if your digestion and respiration are vigorous and healthful. You should summon your own energies, and arrange your thoughts and feelings, so as to be ready to seize upon every favourable circumstance. Do not attempt to deceive your subject, nor pretend that you possess a mysterious power—nor go through any ceremonies to impose upon his credulity, such as *insisting* upon his holding coins in his hand, or looking at any particular object, for if he is a shrewd man, he will suspect your object, and rouse his mind to resistance, and thus defeat you. If you really think that any particular ceremony is useful or important, try it; but let your manner, your words, and even your very thoughts, be pure, sincere, earnest, and benevolent; do not flatter yourself that deception or hypocrisy will aid you; it may in some instances, but it will oftener embarrass you, and prevent your success.

"Corruption wins not more than honesty." Be assured that most persons will submit, and conform themselves, and give you a fair chance to induct them, provided they perceive you are worthy of their confidence—that you have knowledge, sincerity, purity, and energy. If they are susceptible and conformable, and you are honest and powerful, and they feel sure of it, you will certainly succeed—every word which you utter will have an irresistible influence. Your language will seem like *magic eloquence.* Your tones, your gestures, your slightest wishes, expressed or implied, will be sufficient to excite or paralyze any power of body or mind.

The first symptoms which subjects exhibit, are various, and often depend upon their fancy, their previous knowledge or reading, or what they have *heard* is the first effect. But there are some symptoms which are evidently involuntary—one is a slight tremor, which sometimes, though rarely, is increased to convulsive twitchings. If the convulsions become alarming, the operator should never lose his coolness and self-command under any circumstances, but rouse the subject and restore him. Another common and favourable symptom is the breaking out of perspiration, which is of course involuntary. Another symptom is, that when the operator places his hands upon the top of the head and passes them down to the shoulders, the subject breathes louder every time you do so. In some cases none of these symptoms are exhibited, and yet the subject is perfectly inducted in five minutes.

When you wish to ascertain whether you have succeeded in inducting the subject, press your forefinger on the forehead where it joins the nose, or press one finger on one eyebrow and another finger on the other brow, and, in a low voice, say to the subject, "*You cannot open your eyes;*" and if he is sufficiently affected, he cannot open them: he is not asleep, and perhaps, he had no idea till this moment that he was in any degree affected. Now tell him to open his eyes and to put his hands together; lay your finger across them, and say, "You cannot get your hands apart," and he cannot; or, perhaps, he can with a great effort. Now tell him to extend his arm, and when he has done so, tell him that he cannot put it

down, and he cannot. If he is well inducted, you may tell him that he cannot step, or speak, or see, or hear, or taste, and he cannot do it. Tell him that water is rum, or ink, or hot, or cold. Tell him that black is white, that he cannot lift a feather, or a penny, and it will seem so to him. Tell him that a cent is gold, or silver, and he will receive it as such, and give you the change. Tell him that he is a negro, a female, a dog, a fish, a post, a steam-engine—that his head is a coffee-mill—that he is Richard, Hamlet, or what you please, and he is transformed instantly, and verily believes your assertion to be true. Tell him that he can walk until he gets to such a line, but cannot pass over it, and he cannot.

If any other person besides the operator makes the assertion, it has no effect; but if the operator says to the subject, "Such a person has influence over you," then the person or persons mentioned can influence the subject in the same manner.

There is considerable difference in subjects in respect to how far the delusion can be carried—some cannot open their eyes, or step, or move any muscle, yet they cannot be deceived concerning colours, or their own identity; some can only be deluded in one way, and some can in all ways.

The influence will pass off from some subjects within five minutes, and cannot be regained; but in most cases it continues several hours, and in many cases several days.

A large majority of those persons who have ever been inducted or mesmerized in the usual way, can be

made to perform these experiments when perfectly awake, and when no one would suppose from their appearance that they were in any degree affected, or under any peculiar influence. Five minutes are enough to induct them sufficiently for this purpose.

Any person acquainted with the phenomena can feign and imitate all these experiments, so that no sagacity can detect them. The reality of the whole matter can be proved only by the *testimony* of the subject himself. If he is ambitious to enjoy the character of an impostor, he may be gratified by first becoming a liar. When the subject says that he cannot open his eyes, and pledges his honour to the truth of his assertion, the only way is to assume that you believe him. If you doubt him, it is better not to tell him, nor any one else, of your doubts; you *may* do him injustice. Let every one present judge for himself. The operator should never say that he knows that the subject is not deceiving, he should only answer for himself—for his own integrity. He may say, if he thinks proper, what he knows about the character of the subject for truth and honesty; but he cannot truly say that the subject is not deceiving, and he should not risk his own reputation by doing so.

APPENDIX.

From the "Daily Mail," November 30, 1850.

THE EARL OF EGLINTON AND DR. DARLING.

THE following letters, one to and one from the Earl of Eglinton, refer to the very peculiar power possessed by Dr. Darling, and which, it appears, he can communicate to others. When a nobleman such as Lord Eglinton, a man of fine mind, and high mental cultivation, unhesitatingly, and from personal experience, writes so decisively regarding Dr. Darling's science, all minor opponents to its existence will be most likely to maintain silence.

Dr. Darling writes his lordship as follows:—

"Glasgow, Nov. 21, 1850.

"MY LORD,—Pardon, I pray you, this intrusion, for I cannot longer resist either the frequent solicitations of friends, or my own ardent wishes to gratify them. They all unite in requesting me to notify a public meeting here, at which I might in the presence of your lordship, as chairman, demonstrate the reality of my pretensions in Biology, and thus annihilate for ever the aspersions of certain invidious parties, who endeavour to invalidate the truthfulness of my performances.

"Permit me to add that, in that honest effort to justify myself, your lordship's presence, and high rank and character, will be of the most essential service.

"Of course the time for such a vindication and manifestation is left to your lordship's convenience.

"I have the honour to be, my lord, your Lordship's most obedient humble servant,

"H. G. DARLING, M D.

"To the Right. Hon. the Earl of Eglinton and Winton."

His lordship's reply is as follows:—

"Eglinton, Nov. 23, 1850.

"SIR,—Having perfectly satisfied myself of the truthfulness of your performances, and of the existence of the mesmeric power discovered by you to exist, not only by the success of your experiments here, but by having myself succeeded to the same, or even greater extent on others, you are at perfect liberty to make whatever use you please of my convictions. I hardly think that a meeting for the purpose of bringing forward these exhibitions require any one in the character of a chairman; but I shall be happy to attend

such a meeting as a spectator, and support by my presence what I *know* to be true.

"You will perhaps allow me to suggest Monday, 2d December, as a day that will suit me, and that one or two o'clock should be the hour of meeting.

"I remain, your obedient servant,

"EGLINTON AND WINTON.

"H. G. Darling, Esq., M.D."

[Dr. Darling has, we understand, been visiting the Duke and Duchess of Hamilton, at Hamilton Palace, where his experiments were most satisfactory.]

From the "Glasgow Courier," December 3, 1850.

THIS gentleman, who has recently arrived from the United States, and delivered in this city and in Ayrshire, a series of popular lectures on Physiology, terminating each discourse with experiments on Electro-Biology, concluded his course yesterday afternoon and last night. The former took place in the Merchants' Hall, and the latter in the City Hall. The afternoon exhibition was under the special patronage of the Right Hon. the Earl of Eglinton and Winton, and other personages of rank and distinction in the counties of Lanark, Renfrew, and Ayr. The Hall was well filled with a most respectable and influential circle of ladies and gentlemen, amongst whom were the Earl of Eglinton and Winton, Lord Nigel Kennedy and party, Mr. Sheriff Alison, and, indeed, a concourse of the leading magistrates of these counties, and ladies and gentlemen interested in the investigation of the recently propounded scientific theory. Shortly after two o'clock Dr. Darling ascended the platform, and briefly explained that his present object was not so much to gratify the curiosity of his large and respectable assembly, as to test, by experiment, the truthfulness and influence of man's muscular and imaginative powers being subjected to control by means of Electro-Biology. He expressed his gratification in finding that the exhibition had been honoured by the presence of a nobleman no less distinguished for his patriotism and zeal in the advocacy of all social questions, than for his appreciation and encouragement of all who contributed to the advancement of science and literature—he meant the Earl of Eglinton and Winton. These sentiments were loudly applauded. Dr. Darling then summoned parties from the body of the hall to ascend the platform, and submit themselves to the influence of Biology. A number of gentlemen thereupon willingly came forward, amongst whom were Lord Nigel Kennedy, Mr. Savage of the 21st Fusiliers, Captain Keane of Ayr, and others —in all, numbering 14. Having seated the parties in question around the platform, and placed in one of the hands of each a small copper and zinc coin, directing each of the persons to fix his eyes intently upon the object in the palm of his hand, the demonstrator stated that he would test the influence to be exercised by the metallic substance in ten minutes' time. This brief space having

transpired, it was found that there were four individuals who were not passive; and he dismissed them. The muscular system was first put under control. The group, who had meanwhile been bereft of the coins, and ranged in front of the audience, were politely requested to clasp their hands together, and the electro-pass made upon them; they were ordered to dissever the one hand from the other, but in spite of all their exertions, they remained chain-bound. The muscles of the eyes were next operated upon—closed, and ordered to be open, but ineffectual. This operation was most strikingly demonstrated upon all the subjects, and appeared surprising and wonderful to the whole assembly. Other manifestations—such as lifting the hands to the head, turning the hands over the other, (in the familiar schoolboy way of "neevy-neevy-nick-nack,") holding on by the seat, and made sit and stand immoveable—were clearly and distinctly exhibited—the subject being completely under the physical vassalage of the operator. The same was demonstrated in regard to the exercise of sensation by the group. Thus—they were made, each in turn, to drink water, and induced to believe it to be excellent port wine—to feel their heads besieged with hives of bees and all their stinging effects—to burst out into loud fits of laughter; and one of the group, a lad, to imitate a performer on the pianoforte, singing, at the same time, with genuine feeling and pathos, the popular Irish air, "I'm sitting on the Stile, Mary." Indeed the whole exhibition was replete with interest, wonder, amazement, and excitement—demonstrating that, in the hands of a gifted man of science and of skill, and tact, and prudence, like Dr. Darling, science can be constituted the handmaid of mental improvement and infinite social enjoyment. We may explain that one of the gentlemen operated upon yesterday, (Captain Keane,) and who subjected himself to Dr. Darling's influence in Ayrshire, has explained that his sensations were simply a strong mental determination to refuse to do Dr. Darling's bidding—the subject's physical powers involuntarily defeating his intentions by impulsively and forcibly complying with his wishes. He has explained that he never lost his senses, and that he cannot determine how it comes that the muscular powers shall be so completely subject to Dr. Darling's control, whilst the mind is in open rebellion against their motions. At the conclusion of the exhibition, Dr. Darling was highly complimented by the audience for the success of his entertainment, particularly by the Earl of Eglinton and Sheriff Alison. The exhibition in the City Hall, under the patronage of Colonel Browne of the 21st Fusiliers, was as well patronised as the day entertainment. Dr. Darling leaves this city for London, with our belief that he is well qualified to demonstrate his scientific theory to the *savans* of England.

From "Chambers' Journal," February 8, 1851.

I was lately invited to the house of a friend, in order to witness some private experiments in what is called "electro-biology." The

experimentalist was an American gentleman named Darling, who for some months had been giving lectures on the subject in various towns throughout Scotland. I had heard of some extraordinary feats which he had performed at the mansion of the Earl of Eglinton in Ayrshire—such as the arresting of a gentleman's hand as he was raising a glass of wine to his lips, and the fixing of a gentleman to his seat, or the causing him to start up from it under the sense of its being on fire. A Glasgow newspaper assured us that he had on several occasions thrown a number of persons into a peculiar condition, in which he fixed them in a hand-in-hand circle, so fast, that they could not separate—convinced them that they were at a feast, that they were under a heavy shower of rain, that they were drowning, that the audience was laughing at them, with the effect of drawing from them all the demonstrations of feeling suitable to the various situations or conditions in which they believed themselves to be. These were results so entirely beyond the range of ordinary experience, that any thing seemed preferable to belief. There was deception somewhere—collusion—false reporting. . . . A friend whom I accompanied had precisely the same opinions, and he was under less restraint in expressing them. He openly professed his resolution to let the experiment be made upon himself, in the hope of demonstrating the fallacy of the whole matter.

The company assembled was composed of persons of both sexes, generally of the upper ranks of society. Most of them had been present at public demonstrations by Dr. Darling, but these had not been very satisfactory. It was thought that a company of persons well known to each other, and whose recognised respectability placed them above suspicion, would supply patients qualified better to test the verity of the lecturer's professions. We sat down, about thirty in number, in a large drawing-room, and eight or nine persons, including two ladies, came forward as subjects. The lecturer disposed them in a row on chairs, and gave each a small disk, composed of zinc, with a spot of copper in the centre, on which he directed them to keep their eyes fixed for a quarter of an hour or so, in which time it would be ascertained whether any of them were to prove susceptible or not. Meanwhile silence was enjoined. My friend, who had seated himself amongst the rest, with the disk in the palm of his hand, cast me a waggish look before fixing himself in the proper attitude, as much as to say, Now you shall see this humbug exposed. I resolved, for my own part, to watch every thing that was done with the greatest care, in the hope of detecting the *trick* on which I theoretically presumed the whole affair rested. It was soon to appear that trick on the part of the lecturer was entirely out of the question, and that all depended on the fidelity of his patients.

At the end of a quarter of an hour Dr. Darling went softly up to the row of subjects, and said a few words to each in succession, apparently in order to ascertain the condition in which they were. It soon appeared that both ladies were in a favourable state, but that all of the gentlemen but one were unaffected. These accordingly retired, and took their seats amongst the rest of the company.

What was my surprise to find that the one gentleman who appeared susceptible was my friend! The experimentalist was aware of his previous scepticism, and of course felt the greater pleasure in having succeeded with him. He gently laid his hands over the eyes of my friend, and said to him, "Now you cannot open them." A hearty effort seemed to be made, but in vain. The lecturer then said, "*Now* you can open them;" and he opened them accordingly. I question if ever he had occasion to open them wider. We communicated looks, testifying our common sense of surprise. We were, in fact, thrown out—he on finding himself become all at once the subject of suspicion to me and others—and I at finding myself called upon to watch one who had hitherto been my associate in the effort at detection. My friend was now requested to hold out his hands, laid palm to palm. Dr. Darling, after a few passes, and pinching the fingers sharply together, said briskly, "Now you can't separate them." My friend tried in vain to take them asunder, till, on a nod and a word from the experimentalist, he did at length draw them apart. After a few passes along the limbs, my friend was told that he was fixed to his chair. He strained himself to rise, using the most violent muscular efforts; but all in vain, till he received permission. He afterwards acknowledged to me that he had felt as if bound down to his seat by ropes. A touch on the lips imposed an involuntary dumbness on my friend. Not till told that he might now speak, could he utter a word. He was then told that he had forgotten his name. He nevertheless pronounced it. The experimentalist performed a few further manipulations, and said emphatically, "*Now* you can't tell me your name!" Sure enough the word had vanished! Our patient looked up with a blank expression, and then a stare of puzzlement, which I should vainly endeavour to describe. He finally cast a bewildered and pleading gaze upon his fascinator, who calmly smiled and nodded, as if to undo the spell, when out came the missing vocable, apparently to the no small relief of the patient. He was after this fixed to the ground standing. Sway as he might in all directions, not a foot could he move. Dr. Darling also held up his fore-finger, and causing my friend to touch it, told him that he could not draw it away. He accordingly could not. Then, this spell being undone, the lecturer held up his fore-finger, and told my friend he could not touch it. He tried, darting his finger first on one side, then on another—above, below, in all directions but the right one. In short, my friend had become, from a proud sceptic and derider, a perfect victim. He withdrew from the field utterly discomfited. It appeared that he had never been asleep, but continued throughout to possess his usual consciousness. He had really done all he could to resist the commands of the operator; but power had gone from him. He had been absolutely compelled in each case to submit.

[The narrator goes on to describe further experiments of even a more interesting nature, performed on the two ladies who were susceptible subjects.]

From the "Edinburgh Courant," December 28, 1850.

SIR DAVID BREWSTER AND DR. DARLING. ELECTRO-BIOLOGY.

To the Editor of the "Edinburgh Courant."

Sir,—Having observed in your paper of this morning, that you mention me as having acknowledged that there was no collusion between Mr. Darling and the young gentleman on whom he operated on Tuesday evening, I think it right to state, that Mr. Darling never saw Mr. Drummond, who is a distinguished student in the University, and did not even know that he was in the hall.

Fearing that Mr. Darling might not obtain a sufficiently susceptible person for exhibition, and thus disappoint his audience, I accidently saw Mr. Drummond in the hall, and it was at my earnest request that he went to the platform.

I think it right also to state, in justice to Mr. Darling, that the wonderful effects which he produces are best seen in private, when the spectator is near the operator and his patient; and that I had an opportunity of closely watching the effects which he produced upon an officer of the army of high character and undoubted veracity, at Professor Gregory's, on Tuesday last. The gentlemen present were the Duke of Argyle, Mr. Callender of Craigforth, Colonel Gore Brown of the 21st Fusiliers, Professor Gregory, and myself; and I believe they were all as convinced as I was that the phenomena which we witnessed were real phenomena, and as well established as any other facts in physical science. The process by which the operator produces them—the mode by which that process acts upon the mind of the patient—and the reference of the phenomena to some general law in the constitution of man, may long remain unknown; but it is not difficult to see in the recent discoveries of M. Dubois Reymond and M. Matteucci, and in the laws which regulate the relative intensity of the external and internal impressions on the nerves of the sensation, some not very indistinct indications of that remarkable process by which minds of peculiar sensibility are placed under the dominion of physical influences developed and directed by some living agent.

I am, Sir, yours very truly,

D. Brewster.

Royal Hotel, Dec. 26, 1850.

Sir,—I beg to add to the above, that I had brought Mr. Drummond to the hall, unknown to Sir D. Brewster, that the audience might not be disappointed of seeing Mr. Darling's powers, should no susceptible person be discovered among the spectators. Mr. Drummond is known to me as a diligent and able student, on whose integrity the most perfect confidence may be placed.

I am, Sir, yours truly,

William Gregory.

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